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MCQs in Urology

MCQs in Urology

Third Edition

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MCQs in Urology

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Dedicated to

My beloved grandmother ***Late Smt Ginni Devi*** *from whom I got and learned what is honest and unconditioned love.*

My father in law ***Late Sri Satyanarayn Narsaria*** *who was a multitalented and very much affectionately person who never complained for anything in spite of lots of end stage sufferings—and that was exemplary.*

Preface to the Third Edition

This edition came late because of so many reasons, and in between the 8th edition of the Campbell's Urology passed it time. It was strenuous to remake up the mind set after a gap of many years amidst busy practice and social responsibilities, and when the habit of reading like students is no more there. Still, I did my job sincerely.

A new chapter "Molecular Biology, Immunology, and Genetics" has been included.

Many questions from the last edition have been deleted, and about 1000 new questions have been added to this edition.

I hope and believe that this work will be gracefully accepted by the students.

Niranjan Agarwalla

Preface to the First Edition

The contents of this book are designed to provide chapterwise coverage so as to make the readers chapter-based while exercising the mind. There are a large number of controversies regarding some of the topics around the world but due care has been taken to avoid them. The basic aim of this book is to test "how much one knows", not "how much one does not". Most of the questions are self-explanatory with optimum hints so that the readers could organize his/her thoughts and solutions would come in to the mind immediately. It is gateway towards a positive attitude that makes one exercise the storehouse of the vast information kept in mind. I have put all my efforts to make this book up-to-date, handy, informative, knowledgeable, interesting and useful for students as well as urologists and teachers.

I am sure to have left some of the things, untouched, and some of the questions and answers unacceptable to all at large. I shall be grateful if I get open-hearted comments and suggestions from the readers.

I hope the readers benefitted from this humble work.

Niranjan Agarwalla

Acknowledgments

As has always been, I am indebted to my wife Smt Manju, daughter Meghaa, and son Nayan Raj (now a 1st year MBBS student) for their support.

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References:

- *Smith's General Urology, 13th (**SU**) edition, 1992: 14th (**SU14**) edition, 1995.*
- *Campbell's Urology 6th (**CU**), 7th (**CU7**) and 9th (**CU9**) editions.*
- *Manual of Urology-Diagnosis and Therapy, 1st edition (**MU**), 1990.*
- *American Urological Association Update Series (**AUA**) - Vol. XII, 1993: Vol. XIII, 1994: Vol. IV, 1995.*

1 Surgical Anatomy

1. **The lumbodorsal fascia originating from the lumbar vertebrae has got how many distinct layers:**
   A. One **B.** Two
   C. Three **D.** Four *(CU 3)*

2. **The first abdominal branch of the aorta is:**
   A. Left suprarenal artery
   B. Inferior phrenic artery
   C. Right suprarenal artery
   D. Celiac trunk *(CU 13)*

3. **The gonadal arteries arise from the:**
   A. Anterolateral aorta
   B. Posterolateral aorta
   C. Lateral aorta
   D. Renal artery *(CU 13)*

4. **In their retroperitoneal course the gonadal arteries pass___ to the ureter on either side:**
   A. Posterior
   B. Anterior
   C. Sometimes anteriorly
   D. None of ABC are true *(CU 15)*

5. **The testis that drains primarily to the left para-aortic nodal region including nodes above the left renal hilum, with significant drainage to the interaortocaval region but with essentially no drainage to the right paracaval nodes is the:**
   A. Left testis **B.** Right testis
   C. Both testes **D.** Neither *(CU 17)*

6. **The right testis drains primarily to the interaortocaval nodal region with significant drainage to the right paracaval nodes below the right renal hilum and small but real numbers or early metastases from the right testis are distributed to the left para-aortic region. The statement is:**

1 C 2 B 3 A 4 B 5 A 6 C

A. False **B.** Sometimes true
C. True **D.** Not true *(CU 17)*

7. The preganglionic sympathetic fibres of which organ course without interruption and synapse directly with its cells:
A. Kidney
B. Adrenal cortex
C. Testes
D. Adrenal medulla *(CU 18)*

8. Which part of the duodenum lies retroperitoneally?
A. First (ascending) part
B. Second (descending) part
C. Third (transverse) part
D. Whole duodenum except the first part *(CU 18)*

9. Transabdominal exposure to either kidney or ureter is accompanied by incision of the reflection of the anterior colonic visceral peritoneum along a line where it joins the posterior parietal peritoneum lateral to the colon on the posterior body wall. This line is called:
A. White line of Toldt
B. Line of demarcation
C. Cocker's line
D. Avascular line of Campbell *(CU 20)*

10. The adrenals lie ____ the perirenal (Gerota's) fascia superomedial to either kidney:
A. Outside
B. Within
C. Outside the pararenal fascia
D. Above *(CU 20)*

11. In cases of renal ectopia, the adrenal usually is found in approximately its normal anatomic position and does not follow the kidney. This statement is:
A. True **B.** False *(CU 21)*

12. In cases of renal agenesis, the adrenal on the involved side is usually present. It is:
A. True **B.** False *(CU 21)*

13. The normal adult adrenal gland weighs approximately ____ gm and measures ____ cm in greatest transverse diameter:
A. 5 gm; 2-3 cm **B.** 9 gm; 3-5 cm
C. 4 gm; 3-4 cm **D.** 5 gm; 3-5 cm *(CU 21)*

7 D 8 D 9 A 10 B 11 A 12 A 13 D

14. Which adrenal gland assumes a more pyramidal shape and rests more superior to the upper pole of that kidney?
A. Left **B.** Right *(CU 21)*

15. Which adrenal tends to lie more superior in the retroperitoneum than does the other?
A. Left **B.** Right *(CU 21)*

16. The adrenal cortex is _____ derived and forms 80 to 90 per cent by weight of the gland:
A. Ectodermally **B.** Mesodermally
C. Endodermally **D.** Neural crest *(CU 21)*

17. The adrenal cortex has three layers of cells; zona reticularis (R), zona glomerulosa (G), and zona fasciculata (F). They are arranged from outside inwards in which order:
A. GFR **B.** RFG
C. GRF **D.** FGR *(CU 21)*

18. Aldosterone, glucocorticoids, and sex steroids are respectively produced by (Abbreviations from Q. No. 17):
A. GFR **B.** RFG
C. GRF **D.** FGR *(CU 21)*

19. The major arterial source of the adrenal gland is:
A. Superior branch of inferior phrenic
B. Branch directly from aorta
C. Ipsilateral renal artery
D. All of the above *(CU 22)*

20. The adrenal gland is drained by:
A. Single large vein
B. Two veins
C. Three veins
D. Four veins *(CU 22 CMCH)*

21. The adrenal vein of which side is shorter and enters directly into the inferior vena cava:
A. Left
B. Right
C. Right is shorter but left one enters directly to IVC
D. Left is shorter but right one enters directly to IVC
(CU 22)

14 B 15 B 16 B 17 A 18 A 19 D 20 A 21 B

22. The normal kidney in the adult male weighs approximately:
A. 170 gm
B. 150 gm
C. 135 gm
D. 650 gm *(CU 23 JIPMER)*

23. The normal kidney in the adult female weighs approximately:
A. 170 gm **B.** 150 gm
C. 135 gm **D.** 650 gm *(CU 23 BHU)*

24. Which adrenal has a more crescentic shape and rests more medial to the upper pole of that kidney?
A. Left **B.** Right *(CU 21)*

25. At birth the kidneys are irregular in contour with multiple 'fetal lobations'. These lobations typically disappear in the ____ years of life:
A. First **B.** Second
C. Third **D.** Fourth *(CU 23)*

26. The 'dromedary hump' occurs:
A. More commonly on the left kidney
B. More commonly on the right kidney
C. With equal frequency on either kidney *(CU 23 CMCH)*

27. The structures occupying the renal sinus, a space in which renal hilum opens, is/are:
A. Urinary collecting structures
B. Renal vessels
C. Both A and B
D. Only pelvis of the kidney *(CU 24)*

28. The renal medulla consists of multiple distinct conical segments, the renal 'pyramids' the number of _____ calyces:
A. Major **B.** Minor
C. Variable **D.** Total *(CU 24)*

29. The interpyramidal extensions of the renal cortex through which renal vessels enter and leave kidney parenchyma are called:
A. Pyramids
B. Renal columns of Bertin
C. Dromedary hump
D. Columns of Drummond *(CU 24)*

30. A renal lobe is defined as:
A. A single medullary pyramid and its associated surrounding cortex

22 B 23 C 24 A 25 A 26 A 27 C 28 B 29 B 30 A

B. Two pyramids and their associated surrounding cortex
C. The area supplied by one segmental artery *(CU 24)*

31. In most individuals the right kidney lies ___ cm lower in the retroperitoneum than the left; however this is not invariable and in some instances the right kidney may be higher than the left:
A. 2-4 cm **B.** 1-2 cm
C. 3-5 cm **D.** 1-3 cm *(CU 24)*

32. The lower pole of the kidney is slightly pushed more anterior than the upper pole. The medial aspect of each kidney is rotated anteriorly on a longitudinal axis at an angle of about _____ degrees from the true coronal plane:
A. 45 **B.** 30
C. 15 **D.** 60 *(CU 26)*

33. The presence of what prevent most, but not all, large renal cancers from directly invading the liver on the right side:
A. Specific lymphatic drainage
B. Separate blood drainage of those structures
C. The reflection of peritoneum that separates the liver from the kidney
D. Liver's retroperitoneal bare spot *(CU 26)*

34. Which of the ligaments are avascular and can be divided atraumatically with safety?
A. Splenocolic **B.** Splenorenal
C. Hepatocolic **D.** Hepatorenal
E. All of the above **F.** B and D *(CU 26)*

35. The anterior and posterior leaves of Gerota's fascia become fused on three sides around the kidney *except:*
A. Laterally **B.** Medially
C. Superiorly **D.** Inferiorly *(CU 26)*

36. The renal vein (V), artery (A), and pelvis (P) normally lie anteroposteriorly in which order:
A. V, A, P **B.** P, A, V
C. A, V, P **D.** P, V, A *(CU 27)*

37. The right renal artery is _____ than the left:
A. Shorter
B. Equal in length
C. Longer
D. Of variable length *(CU 27)*

31 B 32 B 33 C 34 E 35 D 36 A 37 C

38. The main renal artery divides into four or more segmental vessels, with five branches most commonly described. The first and most constant segmental division is a:
A. Posterior branch
B. Apical
C. Middle
D. Lower
E. Upper
F. None of the above *(CU 27)*

39. The main renal artery and each segmental arteries as well as their multiple succeeding branch arteries are all:
A. Resistant to atherosclerosis
B. End arteries
C. Without anastomosis or collateral circulation
D. B and C *(CU 27)*

40. In the kidney, the segmental arteries branch in which order:
A. Interlobar, lobar, interlobular, arcuate
B. Lobar, interlobar, interlobular, lobular, arcuate
C. Lobar, interlobar, arcuate, interlobular
D. Lobar, interlobar, arcuate, lobular *(CU 28)*

41. The afferent arterioles to the glomeruli are the branches of which artery:
A. Lobar **B.** Interlobar
C. Arcuate **D.** Interlobular *(CU 28)*

42. Stellate veins are ____ in renal parenchyma:
A. Subcapsular venous plexus
B. Interlobular venous plexus
C. Arcuate venous plexus
D. Extracapsular venous plexus *(CU 29)*

43. The right renal vein is ____ than the left:
A. Longer
B. Shorter
C. Equal in length *(CU 29)*

44. The left renal vein is generally ____ times the length of the right:
A. Two
B. Three
C. Four
D. One and half *(CU 29)*

38 A 39 D 40 C 41 D 42 A 43 B 44 B

45. The left renal vein tends to enter the inferior vena cava at a slightly ____ level than the right and more anterolaterally:
A. Higher **B.** Lower
C. Anteriorly **D.** Posteriorly *(CU 30)*

46. Variations of the main renal artery and vein are common, present in one quarter to one-third of individuals. The most common variation is the:
A. Multiple renal veins
B. Supernumerary renal arteries
C. Arteriovenous fistula
D. None of the above *(CU 30)*

47. The supernumerary renal arteries usually arise from the lateral aorta, occur perhaps more commonly on the left than the right and may enter the renal hilum or directly onto the parenchyma of one of the poles of the kidney. To which pole it is more common:
A. Upper
B. Middle
C. Lower
D. Equal frequency *(CU 30)*

48. Supernumerary renal arteries are more common in ____ and may in unusual cases arise from celiac, superior mesenteric or iliac arteries:
A. A normally placed kidney
B. Renal fusion
C. An ectopic kidney
D. Atrophic kidney *(CU 30)*

49. On the left it is more common to see the renal vein divide and send one limb anterior and one posterior to the aorta to reach the inferior vena cava. It is a so- called:
A. Renal collar
B. Venous collar
C. Venous tie
D. Aortic collar *(CU 30)*

50. From the left kidney the lymphatic trunk primarily drain into which lymph nodes:
A. Interaortocaval
B. Lateral paracaval
C. Lateral paraaortic
D. All of the above *(CU 31)*

45 A 46 B 47 A 48 C 49 A 50 C

51. From the right kidney the lymphatic trunk drains primarily to which lymph nodes:
A. Lateral para-aortic
B. Interaortocaval
C. Lateral paracaval
D. Both B and C *(CU 31)*

52. Some lymphatics from the ___ kidney may cross over from ____ to ____ and drain primarily into ____ lateral para-aortic lymph nodes near the ____ renal hilum, although this is not common:
A. Right; right to left; left; left
B. Left; left to right; right; right
C. Left; right to left; left; left
D. Right; left to right; right; right *(CU 31)*

53. Podocytes are specialized epithelial cells which are covered over:
A. Bowman's capsule
B. Malpighian corpuscle
C. Glomerular capillaries
D. Collecting ducts *(CU 31 BHU)*

54. With the capillary endothelium the foot process of what help to form the selective filter across which the first urinary filtrate exists the blood:
A. Podocytes
B. Vasa recti
C. Macula densa
D. Glomerular capillary network *(CU 31)*

55. Which are the first structures of the gross renal collecting system?
A. Major calyces
B. Minor calyces
C. Collecting ducts
D. Proximal tubules *(CU 32)*

56. Renal parenchymal scarring secondary to infection is typically most severe occurring often at renal poles overlying:
A. Compound papillae
B. Compound calyces
C. Dromedary humps
D. White line of Toldt *(CU 34)*

51 D 52 A 53 C 54 A 55 B 56 A

57. The length of the adult ureter is generally:
A. 15-24 cm **B.** 20-30 cm
C. 15-30 cm **D.** 24-30 cm *(CU 35 BHU JIPMER)*

58. When not distended by urine the ureteral mucosa lies in:
A. Circular folds
B. Longitudinal folds
C. Spiral folds
D. Cris-cross folds *(CU 35)*

59. In a normal state urinary effluent is ____ propelled from renal pelvis to bladder:
A. Actively
B. Passively
C. Gravitationally *(CU 35)*

60. Arterial branches to the upper ureter approach from direction and to the pelvic ureter from a _____ direction:
A. Medial: Lateral
B. Lateral: Medial
C. Anterior: Posterior
D. Posterior: Anterior *(CU 38 BHU)*

61. In the abdomen the left ureter primarily drains to which lymph nodes:
A. Right paracaval
B. Interaortocaval
C. Left para-aortic *(CU 38)*

62. In the abdomen the right ureter drains primarily to which lymph nodes:
A. Right paracaval
B. Interaortocaval
C. Left para-aortic
D. Both A and B *(CU 38)*

63. Within the female pelvis, the ureters are closely- related to the uterine cervix and are crossed ___ by the uterine arteries and those are at risk during hysterectomy:
A. Posteriorly **B.** Anteriorly
C. Medially **D.** Laterally *(CU 39)*

64. The kidney receives preganglionic sympathetic input from which spinal segments:
A. T 10 to L 1 **B.** T 12 to L 3
C. T 8 to L 1 **D.** L 1 to S 4 *(CU 39)*

57 D 58 B 59 A 60 A 61 C 62 D 63 B 64 C

65. The primary pacemaker cells of the ureter are located in:
A. Minor calyces **B.** Major calyces
C. Distal tubules **D.** Renal pelvis *(CU 40)*

66. The bladder wall is frequently described as having three muscular coats. But this is true only around which part of the bladder:
A. Dome **B.** Lateral wall
C. Posterior wall **D.** Outlet *(CU 43)*

67. The main blood and nerve supply entering the bladder base is through:
A. Median umbilical ligament
B. Dorsolateral ligament
C. Venterolateral ligament
D. Puboprostatic ligament *(CU 45)*

68. The superior, middle and inferior vesical arteries are branches from the ____ division of the hypogastric artery:
A. Posterior **B.** Anterior
C. Lateral **D.** Medial *(CU 45)*

69. Reaching the bladder the ureter is crossed __ by the vas:
A. Anteriorly **B.** Posteriorly
C. Medially **D.** Laterally *(CU 46)*

70. The intravesical ureter is about 1.5 cm long and is divided into an intramural segment and submucosal segment. The length of the later is:
A. 1.0 cm **B.** 0.1 cm
C. 0.8 cm **D.** 0.5 cm *(CU 47)*

71. Waldeyer's sheath surrounds the:
A. Juxtavesical ureter (distal 3 to 4 cm)
B. Intravesical ureter
C. Intramural segment of ureter
D. Both A and C *(CU 47)*

72. The longitudinal fibres of the intravesical ureter diverge at the ureteral orifice and continue uninterrupted into the base of the bladder as:
A. Deep trigone
B. Superficial trigone
C. Bell's muscle
D. Mercier's bar *(CU 47)*

65 A 66 D 67 B 68 B 69 A 70 C 71 D 72 B

73. In the male the fibres of the superficial trigone terminate at the level of the verumontanum and in female, the same fibres terminate at the level of the ____:
A. External meatus
B. Bladder neck
C. Midurethra
D. Anywhere between bladder neck and external meatus
(CU 47)

74. All the fibres forming Waldeyer's sheath continue downward uninterrupted into the base of the bladder forming the ____:
A. Deep trigone
B. Superficial trigone
C. Bell's muscle
D. Mercier's bar *(CU 47)*

75. The interureteric ridge forming the base of trigonal structure is also called:
A. Bell's muscle
B. Mercier's bar
C. Rice's bar
D. White line Toldt *(CU 47)*

76. Which is probably the weakest part of the urinary bladder?
A. Ureteral hiatus
B. Bladder outlet
C. Dome of the bladder
D. Anterior wall *(CU 48)*

77. The superficial trigone adheres firmly to the overlying mucosal layer. The deep trigone is more firmly adherent and progressively more attached to the underlying detrusor and middle circular layer of the bladder in its:
A. Upper half
B. Lower half
C. Inferolateral part
D. Superolateral part *(CU 47)*

78. Which segment of the urinary bladder is its strongest, least resilient, and most fixed part:
A. Bladder neck
B. Midline posteriorly at the level of the trigone
C. Midline anteriorly at the level of the trigone
D. Retropubic part *(CU 48)*

73 A 74 A 75 B 76 A 77 B 78 B

79. The only fibres that could exert any sphincteric action are the semicircular muscular fibres surrounding the ____ female urethra and proximal (Prostatomembranous) urethra in male:
A. Proximal **B.** Distal
C. Mid **D.** Entire *(CU 49)*

80. The bulk of the external sphincter is around the membranous urethra in the male and the mid-urethral third in the female. It is always most developed ___ ly and thinnest or incomplete ____ ly:
A. Posterior; anterior
B. Anterior; posterior
C. Left laterally; right laterally
D. Right laterally; left laterally *(CU 49)*

81. Histologically the striated muscle of the urethra has slow twitch fibres (low amplitude long time sustaining contraction) and fast twitch fibres. The former constitute about ____ per cent of the overall striated muscle mass:
A. 65 **B.** 35
C. 50 **D.** 15 *(CU 50)*

82. Out of the 65 per cent fast twitch fibres of the striated urethral muscle mass ____ per cent are fatigue resistant:
A. 15 **B.** 50
C. 35 **D.** 65 *(CU 50)*

83. What is the length of the male external sphincter?
A. 1 cm **B.** 1 inch
C. 1 mm **D.** 4 cm *(CU 50)*

84. Which part of the male urethra is the widest and most distensible?
A. Prostatic **B.** Membranous
C. Bulbous **D.** Penile *(CU 51)*

85. Which is the thickest segment of the male urethra?
A. Prostatic (3 cm)
B. Membranous (2-2.5 cm)
C. Bulbous
D. Penile (15 cm) *(CU 52)*

86. Which is the narrowest part in the entire male urethra?
A. Internal meatus
B. External meatus
C. Membranous urethra
D. Bulbous urethra *(CU 52, CMC, BHU)*

79 D 80 B 81 B 82 A 83 B 84 A 85 B 86 B

87. The bulbourethral glands lie on either side of the:
A. Prostatic urethra
B. Bulbous urethra
C. Membranous urethra
D. Fossa navicularis *(CU 52, CMC)*

88. The epithelial lining of the proximal male urethra is transitional until the level of the:
A. Verumontanum
B. Distal point of the membranous urethra
C. Distal end of the prostatic urethra
D. None of A B C *(CU 53)*

89. The female urethra is 4 cm long and is about ____ mm in diameter:
A. 6 **B.** 8
C. 10 **D.** 4 *(CU 52)*

90. The prostate starts to develope at _____ week of intrauterine life:
A. 8th **B.** 6th
C. 10th **D.** 12th *(CU 54)*

91. The normal weight of the prostate gland is about _____ :
A. 18 gm **B.** 24 gm
C. 30 gm **D.** 15 gm *(CU 54)*

92. Approximately ____ per cent of the weight of the prostate is a muscular mass:
A. 20 **B.** 30
C. 40 **D.** 50 *(CU 55)*

93. The zonal anatomy of the prostate has been established by:
A. Lowsly **B.** McNeal
C. Broder **D.** Campbell *(CU 55)*

94. The main blood supply of the prostate is from:
A. Superior vesical artery
B. Middle vesical artery
C. Inferior vesical artery
D. Hypogastric artery *(CU 56)*

95. The dartos of the scrotum is a:
A. Striated muscle **B.** Smooth muscle
C. Mixed muscle **D.** None *(CU 58)*

96. A few strips of the skeletal muscle derived from the ____ constitute the cremasteric muscle:

87 C	88 A	89 A	90 D	91A	92 B	93 B	94 C	95 A	96 B

A. External oblique
B. Internal oblique
C. Transversus
D. Inguinal ligament *(CU 58)*

97. In the genital ridge are the undifferentiated gonads. They start to differentiate into testis by which week:
A. 6th **B.** 7th
C. 8th **D.** 9th *(CU 58)*

98. The stretched length of the seminiferous tubule is about:
A. 1 foot **B.** 2 feet
C. 6 feet **D.** 3 feet *(CU 59)*

99. The ductus (Vas) deferens is a very thick, muscular duct 2 to 3 mm in diameter and about _____ inches long:
A. 18 **B.** 32
C. 25 **D.** 16 *(CU 59, CMC, AIIMS)*

100. Blood supply to the skin of the penis derives from:
A. The internal pudendal arteries
B. The femoral arteries
C. The dorsal arteries of the penis
D. The external iliac arteries
E. The deep inferior epigastric arteries *(AUA 94-2)*

101. Veins that do not join the deep dorsal vein are the:
A. Superficial dorsal vein **B.** Emissory vein
C. Crural veins **D.** Circumflex veins
E. Retrocoronal veins *(AUA 94-2)*

102. The ultimate branch of the internal pudendal artery is:
A. The dorsal artery of the penis
B. The common penile artery
C. The cavernosal artery
D. The urethral artery
E. The bulbar artery *(AUA 94-2)*

103. The first branch of the pudendal nerve in the perineum is:
A. The dorsal nerve of the penis
B. The posterior scrotal nerve
C. The inferior rectal nerve
D. The perineal nerve
E. The cavernosal nerve *(AUA 94-2)*

104. The corpora cavernosa:
A. Contain Helicin arteries and their capillary beds
B. Are contained within the fibrous sheath of the tunica albuginea

97 B 98 B 99 A 100 B 101 C 102 A 103 A 104 A

C. Are drained primarily into the internal pudendal veins
D. Contain erectile tissue that are innervated by way of the pelvic plexus
E. Consist of separate erectile spaces *(AUA 94-2)*

105. The lymphatic system of penis:
A. Following a circumcision drains the distal skin retrogradely into the glans
B. Has large trunks along the shaft draining the glans and lying primarily within the dartos fascia
C. Drains initially to the external iliac nodes
D. Primarily runs with the internal pudendal vessels to reach the internal iliac nodes
E. Is of no consequence in reoperations upon the penis *(AUA 94-2)*

106. Colles' fascia is continuous with:
A. The superficial fascia of the anal triangle
B. The scrotal septum
C. The tunica dartos of the scrotum
D. Buck's fascia of the penis
E. Subcutaneous fat of the abdominal wall *(AUA 94-3)*

107. The perineal membrane is pierced by:
A. The crura of the corpora cavernosa
B. Transverse perineal arteries
C. The dorsal vein of the penis
D. The perineal nerve
E. The bulbar arteries *(AUA 94-3)*

108. The puboprostatic ligaments are primarily derived from:
A. Superior fascia of the urogenital diaphragm
B. Arcuate ligament
C. Parietal pelvic fascia
D. Visceral pelvic fascia
E. Perineal membrane

109. The muscle of the perineum not attached to the bony pelvis is the:
A. Superficial transverse perineal muscle
B. Deep transverse perineal muscle
C. External anal sphincter
D. Pyriformis muscle
E. Ischiocavernosus muscle *(AUA 94-3)*

105 A 106 C 107 E 108 D 109 C

110. The nerve not involved in supplying the scrotal wall is the:
A. Posterior femoral cutaneous nerve of the thigh
B. Pudendal nerve
C. Ilioinguinal nerve
D. Genitofemoral nerve
E. Iliohypogastric nerve *(AUA 94-3)*

111. The membranous urethra:
A. Is lined by simple squamous epithelium
B. Has an outer circular striated sphincter
C. Has no submucosal nerve
D. Lies below the urogenital hiatus of the pelvic diaphragm
E. Is fixed in the position by the bony attachments of the striated sphincter *(AUA 94-3)*

112. The muscle of the perineum not attached to the perineal body is the:
A. Bulbospongiosus
B. Ischiocavernosus
C. Rectourethralis
D. Striated external urethral sphincter
E. Deep transversus perinei *(AUA 94-3)*

113. At the pelvic inlet, the true and false pelves are separated by the:
A. Pectinet line **B.** Arcuate line
C. Levator plate **D.** Pelvic fasciae *(CU 7 89)*

114. Which of the following form a sling that suspends the female urethra beneath the pubis?
A. Uterosacral and pubourethral ligaments
B. Pubovisceral and suspensory ligament of the clitoris
C. Pubourethral and pubovisceral ligament
D. Suspensory ligament of the clitoris and posterior urethral ligament *(CU 7 117)*

115. The kidney has how many constant vascular segments?
A. Three **B.** Four
C. Five **D.** Six *(CU 7 2975)*

116. The Smith's space is a space between:
A. Skin and dartus
B. Dartus and Buck's fascia
C. Buck's fascia and tunica albuginea
D. Tunica albuginea and erectile tissue *(CU 7 3377)*

117. The descending portion of the duodenum, the _____ part, is of most importance to the urologist because is lies immediately anterior to the renal hilim and pelvis.

110 E 111 B 112 B 113 B 114 D 115 B 116 D 117 B

A. 1st **B.** 2nd
C. 3rd **D.** 4th *(CU9-19)*

118. Posterolateral gluteal skin and skin in pubic region is the sensory function of _____nerve.
A. Iliohypogastric
B. Ilioinguinal
C. Genitofemoral
D. Lateral cutaneous of thigh *(CU9-19)*

119. Gerota's fascia envelops kidney in all aspects except____where it is not closed but instead remains an open potential space.
A. Inferiorly **B.** Superiorly
C. Medially **D.** Laterally *(CU9-25)*

120. Renal hilar structures from anterior to posterior are:
A. Renal pelvis, renal artery, renal vein
B. Renal vein, renal artery, renal pelvis
C. Renal vein, renal pelvis, renal artery
D. Renal artery, renal pelvis, renal vein *(CU9-25)*

121. Typically there are 7 to 9 papillae per kidney, but this number is variable, varying from ____to____.
A. 4-8 **B.** 6-20
C. 6-10 **D.** 2-14 *(CU9-31)*

122. Renal papillae are arranged in two longitudinal rows situated approximately—degree from one another.
A. 90 **B.** 60
C. 100 **D.** 45 *(CU9-31)*

123. The progression of arterial supply in the kidney is as follows:
A. Renal artery(RA)-Segmental artery(SA) - Interlobar artery(IA)-Arcuate artery (AA) - Interlobular artery (ILB)-Affarant artery (AFA)
B. RA - SA - IA - AA - AFA - ILB
C. RA - SA - AFA - ILB - AA - IA
D. RA - SA - ILB - IA - AA - AFA *(CU9-25)*

124. Signal travel with sympathetic nerves and result in visceral type of pain referred to the sympathetic distribution of the kidney and ureter __ through __.
A. T8, L2 **B.** T9, L1
C. T10, L1 **D.** T12, L2 *(CU9-37)*

118 A 119 A 120 A 121 A 122 A 123 A 124 A

125. There are ___ elevation of the peritoneum on the internal surface of the anterior abdominal wall when approached laparoscopically.

A. Two **B.** Three
C. Four **D.** Five *(CU9-43)*

126. The inguinal canal transmits ___ in both sexes.

A. Ilihypogastric nerve **B.** Ilioinguinal nerve
C. Genitifemoral nerve **D.** All of A, B, C *(CU9-43)*

127. The muscle of trigone forms___ distinct layers.

A. 3 **B.** 4
C. 2 **D.** 5 *(CU9-43)*

128. In general the glands of prostate are tubuloalveolar with relatively simple branching and lined with simple____ epithelium.

A. Cuboidal or columnar **B.** Squamous
C. Cuboidal **D.** Columnar *(CU9-61)*

129. Anterior wall of the scrotum and labium majus are supplied by__.

A. Ilioinguinal and genitofemoral nerves
B. Iliohypogastric and genitofemoral
C. Genitofemoral only
D. Obturator and lateral cutaneous nerve of thigh *(CU9-73)*

130. Scrotal lymphatics do not cross the median raphe and drain into___lymph nodes.

A. Ipsilateral superficial
B. Contralateral superficial
C. Ipsilateral deep
D. Contralateral superficial *(CU9-73)*

131. In its course to the testis, the testicular artery branches into an inferior artery, an inferior testicular artery and into a capital artery to the___ of the epididymis.

A. Head **B.** Tail
C. Corpus **D.** Wrong statement *(CU9-74)*

132. How many sphincters are recognized in male urethra?

A. Two **B.** Three
C. Four **D.** Five *(CU9-1030)*

125 B 126 B 127 A 128 A 129 A 130 A 131 A 132 D

133. The perineal body is formed by the interconnection of ___ muscles.

A. Two **B.** Eight
C. Four **D.** Six *(CU9-1039)*

134. The normal volume of seminal vesicle (normal adult size is 5 - 10 X 3 -5 cm):

A. 13 ml **B.** 9 ml
C. 20 ml **D.** 2 ml *(CU9-1109)*

135. In the healthy, nonstressed adults, the adrenal gland weighs ___.

A. 2000 mg **B.** 5 gm
C. 10 gm **D.** 15 gm *(CU9-1822)*

136. The majority of boys up to 3 years of age have an external urinary meatus that is _____ French: from 4 to 10 years, it is 12 French; and in older boys, the majority have a meatus that is 14 French.

A. 6 **B.** 8
C. 10 **D.** 12 *(CU9-3749)*

133 B 134 A 135 B 136 C

2 Physiology

1. **Approximately how many nephrons are there in two adult human kidneys:**
   A. 2-3 million **B.** 3-4 million
   C. 1-2 million **D.** 1.5-2 million *(CU 70)*

2. **The nephrons in the metanephros appear to function as early as ____ week of fetal life:**
   A. 10th-11th **B.** 11th-12th
   C. 13th-14th **D.** 14th-16th *(CU 70)*

3. **Total renal blood flow as estimated by CPAH technique and confirmed by a variety of methods is how much/ml/minute/1.73 m^2:**
   A. 650 ml **B.** 1200 ml
   C. 1300 ml **D.** 1400 ml *(CU 73)*

4. **In infants up to one year of age, renal blood flow is about one half of the adult flow; it reaches the adult level at about __ years of age:**
   A. One **B.** Two
   C. Three **D.** Four *(CU 73)*

5. **When related to the renal mass the renal blood flow is about:**
   A. 4 ml/gm/min **B.** 6 ml/gm/min
   C. 8 ml/gm/min **D.** 2 ml/gm/min *(CU 73)*

6. **The renal cortex receives how much of the total renal blood flow:**
   A. 60 per cent **B.** 70 per cent
   C. 80 per cent **D.** 90 per cent *(CU 73)*

7. **The outer cortex receives about 5 to 6 ml blood/minute, whereas the outer medullary flow is only about:**
   A. 1 ml/minute **B.** 2 ml/minute
   C. 3 ml/minute **D.** 0.5 ml/minute *(CU 73)*

1 A 2 B 3 B 4 C 5 A 6 D 7 A

8. The clearance of ____ measured during a contrast infusion is the standard for measurement of GFR:
A. Inulin **B.** Creatinine
C. PAH **D.** Urea *(CU 73)*

9. The principal site of nephron handling for all of the following solutes is proximal tubule *except:*
A. Phosphate **B.** Hydrogen
C. Uric acid **D.** Glucose
E. Amino acids **F.** Citrate *(CU 73)*

10. The most widely-used equation described by CrockCroff and Gault for estimating the GFR without awaiting the results of 24 hour urine collection is-GFR=(140-age) (weight)/72 Scr ml/ minute, where Scr=serum creatinine: age in years and weight in Kg. For women the equation is multiplied by:
A. 1 **B.** 0.85
C. 0.65 **D.** 0.25 *(CU 74)*

11. The principal driving force for glomerular filtration at the glomerular capillary is:
A. Oncotic pressure
B. Colloid osmotic pressure
C. Hydrostatic pressure
D. Glomerular ultrafiltration coefficient *(CU 74)*

12. Atrial natriuretic peptide (ANP) is secreted principally by the atrial myocytes in response to increased intravascular volume. In the kidney it increases GFR, increases renal plasma flow and:
A. Decreases tubular sodium reabsorption
B. Increases tubular sodium reabsorption
C. Increases tubular hydrogen reabsorption
D. Increases tubular chloride reabsorption *(CU 77)*

13. Fractional excretion of sodium which is obtained by dividing the clearance of sodium by the clearance of creatinine provides an index. Which of the following statement is true:
A. A value lower than one per cent favours a prerenal aetiology of azotemia
B. A value more than 1 per cent favours a renal cause of azotemia
C. A value lower than 1 per cent favours a renal cause of and more than 1 per cent favours a prerenal cause of azotemia
D. Both A and B *(CU 78)*

8 A 9 B 10 B 11 C 12 A 13 D

14. The kidneys receive ____ per cent of cardiac output while constituting only one half of one per cent of the total body mass:
A. 20 **B.** 30
C. 40 **D.** 25 *(CU 70)*

15. The kidney excrete net acid at a rate equal to the rate of extrarenal net acid production which approximately is:
A. 1-2 mEq/kg/day
B. 0.3-1 mEq/kg/day
C. 2-4 mEq/kg/day
D. 4-6 mEq/kg/day *(CU 79)*

16. Normal filtered load of bicarbonate is about 4500 mEq/day. Less than 0.1 per cent of it appear in the final urine. Approximately ____ per cent of the filtered bicarbonate is reclaimed by the proximal tubule:
A. 60 **B.** 70
C. 80 **D.** 90 *(CU 79)*

17. In proximal renal tubular acidosis (type 2) nephrocalcinosis and renal calculi formation are rare. In this disease the excretion of which of the following is increased:
A. Citrate **B.** Phosphate
C. Both A and B **D.** Potassium
E. Sodium **F.** Calcium
G. Both A and F *(CU 81)*

18. Inability to produce a urine pH less than 5.4 even when challenged with ammonium is found in:
A. Proximal renal tubular acidosis (type 2)
B. Distal renal tubular acidosis (type 1)
C. Complete renal tubular acidosis
D. Incomplete renal tubular acidosis *(CU 81)*

19. Patients of both complete and incomplete RTA of type 1 presents with nephrocalcinosis. The former group are ___ and the later are ____:
A. Acidotic; nonacidotic
B. Nonacidotic; acidotic
C. Both are acidotic
D. Both are nonacidotic *(CU 82)*

20. More than 90 per cent of potassium undergoes glomerular filtration. Most of it is reabsorbed in:
A. Proximal tubule **B.** Loop of Henle
C. Distal tubule **D.** Collecting ducts
E. Both A and B *(CU 83)*

14 A 15 B 16 C 17 G 18 B 19 A 20 E

21. The bulk of potassium in the final urine is added to tubular fluid by secretion in the:
A. Proximal tubule
B. Loop of Henle
C. Late distal tubule
D. Cortical collecting ducts
E. Both A and B
F. Both C and D *(CU 83)*

22. The bulk of calcium reabsorption occurs in ____:
A. Proximal tubule **B.** Loop of Henle
C. Both A and B **D.** Distal tubule *(CU 83)*

23. Most of the phosphate reabsorption occurs in ____:
A. PCT **B.** Loop of Henle
C. DCT **D.** Collecting ducts *(CU 84)*

24. At typical urine flow rate of 1 ml/min, ____ per cent of filtered urea is reabsorbed in the proximal tubule:
A. 20-40 **B.** 30-40
C. 40-50 **D.** 50-60 *(CU 84)*

25. Uric acid is the end product of___catabolism:
A. Valine **B.** Alanine
C. Methionine **D.** Purine *(CU 84)*

26. Many of the effects of atrial natriuretic peptide (ANP) on the kidney vasculature are to those of which drug:
A. Dopamine **B.** Adrenaline
C. Nifedipine **D.** Atenolol *(CU 87)*

27. Insulin directly decreases urinary excretion of _____ and phosphate:
A. Sodium **B.** Potassium
C. Calcium **D.** Magnesium *(CU 88)*

28. Erythropoietin is produced primarily by which organ?
A. Liver **B.** Kidneys
C. Spleen **D.** Bone marrow *(CU 91)*

29. The major adverse event reported in patients with chronic renal failure receiving recombinant human erythropoietin is _____:
A. Elevated blood pressure
B. Bone pain
C. Migraine
D. Psychosis *(CU 92)*

21 F 22 C 23 A 24 B 25 D 26 A 27A 28 B 29 A

30. Angiotensin I is _____:
A. An octapeptide
B. A decapeptide
C. A heptapeptide *(CU 92, BHU)*

31. Plasma levels of angiotensinogen, or renin substrate, are increased in all of the following conditions *except:*
A. Cirrhosis of liver
B. Cushing's syndrome
C. Pregnancy
D. Ureteral ligation
E. Bilateral nephrectomy *(CU 93)*

32. More than 90 per cent of the kallikrein in the kidney is found in the ____:
A. Renal medulla
B. Cortex
C. Corticomedullary junction *(CU 94)*

33. Vitamin 1, 25-dihydroxy D_3 is approximately how many times more active on a weight basis than is vitamin D in inducing intestinal calcium transport and bone calcium mobilisation:
A. 40 **B.** 30
C. 20 **D.** 10 *(CU 96)*

34. There are receptors for 1, 25-dihydroxy D_3 in the _____ gland:
A. Adrenal **B.** Pituitary
C. Parathyroid **D.** Intestinal *(CU 97)*

35. Insulin like growth factor-1 (IGF-1) to synthesised in ____:
A. Kidneys
B. Adrenals
C. Pancreas
D. Pituitary *(CU 97)*

36. The most abundant prostaglandin in kidney to ____:
A. PGI_2 **B.** PGE_2
C. PGG_2 **D.** PGH_2 *(CU 99)*

37. Which is the most effective prostaglandin in increasing renin release?
A. PGI_2 **B.** PGE_2
C. PGG_2 **D.** PGH_2
B. PGI_1 *(CU 99)*

30 B 31 A 32 B 33 D 34 C 35 A 36 A 37 A

38. Which part of the kidney has been shown to contain the highest concentration of immunoreactive endothelin (a potent vasoconstrictor)?

A. Renal cortex **B.** Inner medulla
C. Outer medulla **D.** Loop of Henle

(CU 100)

39. Kidney metabolises which of the following hormone the most:

A. Insulin **B.** Parathyroid
C. Calcitonin **D.** Glucagone
B. Prolactin **F.** Angiotensin
G. Growth hormone **H.** Vasopressin
I. Gastrin *(CU 101)*

40. In men what per cent of filtered insulin is excreted in the urine:

A. Less than 1 **B.** 05
C. 10 **D.** 3 *(CU 101)*

41. The increase in glucagon levels found in uraemia is due to____:

A. Hypersecretion of the hormone
B. Decrease in metabolic clearance
C. Both A and B
D. None of A, B or C *(CU 102)*

42. Advancing renal failure is almost universally accompanied by rise in circulating levels of PTH. This is a consequence of:

A. Increased secretion of the hormone
B. Impaired degradation of the hormone in the liver
C. Impaired degradation of the hormone in the kidney
D. All of the above
E. Both B and C
F. None of the above *(CU 102)*

43. Which of the following has the least biologic activity?

A. Angiotensin I
B. Angiotensin II
C. Angiotensin III *(CU 104)*

44. Latent pacemaker for ureteral peristalsis are located in:

A. Minor calices
B. Major calices
C. Pelvicaliceal border
D. Other than A, B, C areas of the ureter *(CU 114)*

45. Conduction in the ureter is similar to that in cardiac tissue and the conduction velosity in the ureter is:

38 B 39 E 40 A 41 B 42 D 43 C 44 D 45 C

A. 0-6 cm/sec
B. 5-6 cm/sec
C. 2-6 cm/sec
D. 6-8 cm/sec *(CU 115)*

46. The resting ureteral pressure is approximately:
A. 0-5 cm H_2O
B. 4-5 cm H_2O
C. 0-5 mm Hg
D. 4-5 mm Hg *(CU 120)*

47. The pressure of the superimposed ureteral con-traction ranges from 20 to 80 cm H_2O and occurs ____ times per minute:
A. 2-6 **B.** 2-8
C. 0-6 **D.** 5-10 *(CU 120)*

48. The best method now available for differentiating obstructive from nonobstructive dilatation of the ureter depend on assessing the:
A. Intraluminal pressure
B. Pressure at the UVJ
C. Efficacy of urine transport
D. None of these is best *(CU 126)*

49. Whitaker and associates have concluded from a large clinical experience that a pressure in the ureter less than 15 cm H_2O correlates with a nonobstructive state, whereas pressure greater than____cm H_2O invariably correlates with obstruction:
A. 20 B. 22
C. 25 D. 32 *(CU 127)*

50. Two factors that appear to be most useful in facilitating stone passage from the ureter are:
A. Increase in intraureteric pressure due to more of peristaltic activity
B. Increase in hydrostatic pressure proximal to calculus
C. Relaxation of the ureter in the region of the stone
D. Relaxation of the ureter distal to the stone
(CU 129)

51. Hydroureteronephrosis of pregnancy begins in the second trimester of gestation and subsides _____ after parturition:
A. Within three months
B. Within the first month
C. Within three weeks
D. Within six weeks
E. Within 12 weeks *(CU 129)*

46 A 47 A 48 C 49 B 50 B,C 51 B

52. The hydroureteronephrosis of pregnancy is more severe on ____ side and, the ureteral dilatation does not occur below the pelvic brim:
A. Left **B.** Right *(CU 129)*

53. What appears to be the primary factor in the development of hydronephrosis of pregnancy?
A. Obstruction
B. Progesterone
C. Sedentary habit during pregnancy
D. Toxic byproduct metabolites of pregnancy *(CU 130)*

54. Cholinergic agonists, including acetylcholine, methacholine, carbamylcholine (carbachol), and bethanechol (urecholine), in general have an ___ effect on ureteral function, that is, to increase/ decrease the frequency and force of contraction:
A. Excitatory **B.** Inhibitory *(CU 133)*

55. Which of the following drugs have an exitatory effect on ureteral function?
A. Verapamil **B.** Histamine
C. Narcotic analgesics **D.** Carbachol *(CU 134)*

56. Although apical epithelial cells of urinary bladder are impermeable to water, they actively transport _____ by various channels:
A. Sodium **B.** Potassium
C. Magnesium **D.** Urea *(CU 142)*

57. Which is an atypical feature of bladder smooth muscle?
A. Thick myosin filaments
B. Thin actin filaments
C. Absence of gap junctions
D. Absence of tropomyosin *(CU 144)*

58. The external urethral sphincter provides more than ____ per cent of the static urethral resistance:
A. 20 **B.** 30
C. 40 **D.** 50 *(CU 145)*

59. Thin muscle filaments of urinary bladder contain an inhibitory protein known as:
A. Actin **B.** Myosin
C. Tropomyosin **D.** Caldesmon *(CU 145)*

60. Onuf's nucleus is spared in:
A. Amyotrophic lateral sclerosis
B. Shy-Drager syndrome

52 B 53 A 54 A 55 A 56 A 57 C 58 D 59 D 60 A

C. Tabes dorsalis
D. Multiple sclerosis *(CU 150)*

61. Two most commonly used anticholinergics to treat detrusor hyperreflexia:
A. Carbamylcholine
B. Bethanechol
C. Propantheline
D. Oxybutynin *(CU 151, CMC)*

62. The transmitter candidates within the urinary bladder afferents include:
A. Substance P
B. Vasoactive intestinal peptide
C. Cholecystokinin
D. Calcitonin gene-related peptide
E. A, C and D
F. All of A, B, C and D *(CU 159)*

63. Voiding depends on a spinobulbospinal reflex re-layed through a region of rostral brainstem referred to as pontine micturition center (PMC) or:
A. Barrington's nucleus
B. Onuf's nucleus
C. Red nucleus
D. Dentatus nucleus *(CU 160)*

64. In patients with spinal cord lesions, naloxone _____ detrusor hyperreflexia:
A. Exacerbates
B. Inhibits
C. Has no role in *(CU 166)*

65. Visceral pain is best described by:
A. Sharp, crampy pain
B. Bloated, intense feelings of pain
C. Burning and stabbing symptoms
D. Dull, deep, aching symptoms
E. Vague, nondescript sensations *(AUA 93-9)*

66. Visceral pain:
A. Is referred to the skin or somatic area from the affected organ
B. Is rarely referred beyond the affected viscera
C. Usually does not involve the pleura or perito-neum
D. Is pathognomonic of hollow structures
E. Seldom involve any structures except the hollow organs *(AUA 93-9)*

61 C,D 62 F 63 A 64 A 65 D 66 A

67. All of the following can be obtained noninvasively *except:*
A. Cardiac output **B.** Ejection fraction
C. Oxygen saturation **D.** Arterial pH
E. Heart rate *(AUA 93-22)*

68. The most likely organ to fail in multiple organ failure is the:
A. Kidney **B.** Liver
C. Lung **D.** Heart
E. Coagulation system *(AUA 93-23)*

69. The first organ to fail in multiple organ failure is usually the:
A. Coagulation system **B.** Lung
C. Liver **D.** Kidney
E. Heart *(AUA 93-23)*

70. Metabolic effects of tumor necrosis factor—alpha include all of the following *except:*
A. Stabilisation of cell membrane function
B. Skeletal muscle proteolysis
C. Increased microvascular permeability
D. Anaemia
E. Induction of endothelial procoagulant activity *(AUA 93-23)*

71. Platelet-activating factor:
A. Is a coronary vasodilator
B. Increases cardiac output
C. Increases myocardial contractility
D. Has been implicated in splanchnic hypoperfusion
E. Decreases stress-related gastric mucosal injury *(AUA 93-23)*

72. The hypermetabolic phase of multiple organ failure is characterized by all of the following *except:*
A. Decreased skeletal muscle protein synthesis
B. Decreased net hepatic protein synthesis
C. Increased resting energy expenditure
D. Progressive decrease in glucose oxidation
E. Increased utilisation of lactate *(AUA 93-23)*

73. Aspects of critical illness that may contribute to disruption of gastrointestinal barrier against infection with endogenous microflora include all of the following *except:*
A. Premature resumption of enteral feedings
B. Coincident malnutrition
C. Antacid prophylaxis of stress-related gastric haemorrhage
D. Ileus
E. Broad spectrum antibiotic therapy *(AUA 93-23)*

67 D 68 C 69 B 70 A 71 D 72 A 73 A

74. Oxygen is toxic to human lung in inspired concentrations greater than:
A. 25 per cent
B. 35 per cent
C. 50 per cent
D. 70 per cent *(AUA 93-24)*

75. Deleterious effects of ventilation with positive and expiratory pressure potentially include all of the following *except:*
A. Decreased functional residual capacity
B. Decreased cardiac output
C. Decreased renal function
D. Pneumomediastinum
E. Pneumothorax *(AUA 93-24)*

76. The risk of perioperative myocardial infarction with uncorrected provocable myocardial ischemia as determined by dipyridamole-thallium scanning is approximately:
A. 30 per cent
B. 40 per cent
C. 50 per cent
D. 60 per cent
E. 70 per cent *(AUA 93-24)*

77. Mortality is highest in pneumonia caused by:
A. *Pseudomonas aeruginosa*
B. *Klebsiella oxytoca*
C. *Citrobacter diversus*
D. *Enterobacter cloacae*
E. *Staphylococcus aureus*

78. Common pathogens in nosocomial pneumonia in surgical patients include all of the following *except:*
A. *Pseudomonas aeruginosa*
B. *Klebsiella oxytoca*
C. *Enterobacter cloacae*
D. *Citrobacter diversus*
E. *Staphylococcus aureus* *(AUA 93-24)*

79. Which statement is true regarding microbiology in the pathogenesis of multiple organ failure (MOF)?
A. Blood cultures for *candida* are almost always positive in fungemia
B. Empiric broad-spectrum antibiotic therapy is appropriate in incipient MOF even if cultures are negative

74 C 75 A 76 C 77 A 78 D 79 C

C. The causative organism may be irrelevant to the subsequent course of MOF
D. Infection with gram-negative organisms causes a more fulminant course
E. Infection with gram-positive organisms causes a more fulminant course *(AUA 93-24)*

80. In men, all of the following contribute to continence *except:*
A. Coaptation of the urethral mucosa
B. Urethral length
C. Smooth muscle tone in the proximal sphincter
D. Conformation and elasticity of the bladder neck
E. Slow-twitch muscle activity in the distal sphincteric area *(AUA 95-2)*

81. In women, all of the following contribute to continence *except:*
A. Urethral pressure is greater than intravesical pressure throughout all events other than voiding
B. Delayed contraction of the pelvic floor
C. Position of the bladder neck and proximal urethra
D. Reflex contraction of the striated pelvic floor muscle with Valsalva
E. Diameter of the urethra *(AUA 95-2)*

82. A neuroenteric cyst is induced to form when what pathophysiologic event occurs?
A. Disjunction fails to occur
B. The neural folds fail to fuse on contact
C. A split notochord and split neural tube occur with the endoderm subsequently contacting the cutaneous ectoderm
D. The notochord splits and the endoderm comes into contact with the neural tube
E. When defective retrogressive differentiation occurs *(AUA 95-10)*

83. Which of the following has not been shown to exist in higher concentrations of spermatic veins over peripheral vein levels?
A. Catecholamines **B.** Prostaglandins
C. Cortisol **D.** Phospholipase A_2
E. Serotonin *(AUA 95-13)*

84. Sensory and motor innervation to the pelvis viscera is derived from:
A. S_2 **B.** S_3
C. S_{2-4} **D.** S_{2-3}
E. S_{3-4} *(AUA 95-17)*

80 B 81 E 82 C 83 C 84 B

85. Pudendal nerve mediated pain can refer to which of the following?
A. Glans penis **B.** Ischial tuberosity
C. Thigh **D.** Scrotum/testis
E. All of the above *(AUA 95-17)*

86. The urethral sphincter motor innervation is derived mainly from:
A. S_1 **B.** S_2
C. S_3 **D.** S_{2-4}
E. S_{3-4} *(AUA 95-17)*

87. NSAIDs act by inhibition of:
A. Prostaglandin **B.** Leukotriene
C. Histamine **D.** Bradykinin
E. Substance P *(AUA 95-17)*

88. Visceral afferents compose approximately which per cent of the total afferent make-up of peripheral nerve?
A. 2 per cent **B.** 15 per cent
C. 40 per cent **D.** 60 per cent
E. 98 per cent *(AUA 1995-17)*

89. Tricyclic drugs acts primarily by:
A. Inhibition of serotonin re-uptake at the synaptic terminal
B. Blocking nociceptor polypeptides
C. Treatment of depression/anxiety
D. Facilitation of sensation release from the synaptic terminal
E. Inhibition of substance P *(AUA 95-17)*

90. The double helix of the DNA is wound twice around a spool of eight histone molecules to form_____, which are the fundamental repeating units of chromatin:
A. Histone protein
B. Nucleosomes
C. Chromatin thread
D. Solenoid *(CU 7 8)*

91. The correspondence in position between the variable number of tandem repeats (VNTR) bands from the two samples is the key to:
A. Identification in DNA fingerprinting
B. The central dogma of molecular biology
C. Restriction fragment length polymorphism (RFLPs)
D. DNA cloning *(CU 7 19)*

85 E 86 B 87 A 88 A 89 A 90 B 91 A

92. Elevated levels of _____ are important for maintaining GFR in physiologic conditions and in disease states:
A. Angiotensin II
B. Norepinephrine
C. Endothelins
D. Angiotensin I *(CU 7 266)*

93. Which can independently increase GFR without a corresponding increase in renal blood flow as a consequence of simultaneous afferent arteriolar vasodilation, efferent arteriolar vasoconstriction, and increases in filtration fraction of K?
A. Vasopressin
B. Lipoxins
C. Renin
D. Atrial nitriuretic peptide *(CU 7 269)*

94. The main site of regulated potassium secretion is:
A. Proximal tubule
B. Loop of Henle
C. Cortical collecting duct
D. Medullary collecting tubule *(CU 7 278)*

95. Hairpin shaped vessels are:
A. Vasa recta
B. Tunica vasculosa
C. Arcuate vessels
D. Interlobular vessels *(CU 7 290)*

96. Apoptosis is:
A. The cricis or end of a disease
B. Transurethral removal of verumontanum
C. Is genetically programmed active cell death
D. Is contact cell-cell inhibition *(CU 7 1548)*

97. Which of the following statement is false regarding the mechanism that lead to normal renal ascent?
A. Cephaloid growth of the spine
B. Elongate growth of the ureter
C. Molding of the renal parenchyma
D. Fixation of the kidney to retroperitoneum *(CU 7 1563)*

98. The first secretion and drainage of renal-urine (that precedes muscularisation of the upper ureter) occurs at ____weeks of gestation:
A. 9 **B.** 12
C. 15 **D.** 18 *(CU 7 1567)*

92 A 93 D 94 C 95 A 96 C 97 A 98 A

99. In the development of the trigone and urinary bladder *in utero*, the terminus of the ureter enters the bladder directly by day:
A. 37 **B.** 57
C. 75 **D.** 12 *(CU 7 1571)*

100. Continence of the bladder urine in fetus may be possible at about _____ when urethral sphincter muscles encircle the urethra:
A. 16 weeks
B. 5 months
C. 8 months
D. The time of EDD *(CU 7 1577)*

101. Separation of the prepuce from the glans begins by ___ months of gestation:
A. 3
B. 6
C. 9
D. It occurs at the age of about four years in life *(CU 7 1584)*

102. The syndrome of hernia uteri inguinale results from a lack of _____ at the end of the indifferent stage of development:
A. Müllerian inhibiting substance (MIS)
B. Epidermal growth factor (EGF)
C. Keratinocyte growth factor (KGF)
D. Insulin like growth factor (IGF) *(CU 7 1591)*

103. The fetal kidney does produce urine as early as 9th week of gestation, but in the first two trimesters fetal urine is:
A. Isotonic
B. Hypertonic
C. Hypotonic
D. Sometimes hypotonic and sometimes hypertonic, seldom isotonic *(CU 7 1601)*

104. The most common form of renal malrotation:
A. Ventral position
B. Ventromedial position
C. Dorsal position
D. Lateral position *(CU 7 1729)*

105. The blood-testis barrier develops:
A. At the onset of spermatogenesis
B. At the onset of puberty

99 A 100 A 101 A 102 B 103 A 104 C 105 A

C. In the fetal life
D. In neonatal period *(CU 7 1261)*

106. Find out the wrong statement:
A. The E group of prostaglandins is the major component in the male reproductive tract, whereas the F group predominates in the female system
B. PSMA stands for prostate-specific membrane antigen
C. DHT is the major form of androgen found in the prostate gland
D. Only the protein bound testosterone is available to the prostate for uptake and metabolism to dihydrotestosterone (DHT) *(CU 7 1392-1399)*

107. Which of the following is believed to be involved in male pattern baldness, acne, and hirsutism, as well as BPH?
A. 5 alpha reductase
B. Fibroblast growth factor
C. Epidermal growth factor
D. Transforming growth factor *(CU 7 1405)*

108. The primary physiologic control of aldosterone secretion is by:
A. Vasactive intestinal peptide (VIP)
B. Atrial natriuretic factor (ANF)
C. Angiotensin II (AII)
D. Vasopressin *(CU 7 2921)*

109. Lymphatic drainage of prostate is primarily to___lymph nodes.
A. Obturator **B.** Internal Iliac
C. Inguinal **D.** Both A and B *(CU9-63)*

110. Chronic scrotal pain is generally a dull, heavy sensation that.....
A. Does not radiate
B. Radiates to inguinal area
C. Radiates to renal area *(CU9 83)*

111. ___ is an endogenous plasma marker of GFR which has constant rate of production unaffected by diet, and clearance is not influenced by tubular function.
A. Creatinine **B.** Urea
C. Cystatin C **D.** Inulin *(CU9-1133)*

112. Primary effect of ___ in the kidney is renoprotection from oxidant injury. It protective against ischemia-reperfusion injury in native and transplant kidney.

106 A 107 D 108 A 109 D 110 A 111 C 112 B

A. CO_2 **B.** CO
C. NO **D.** O_2 *(CU9-1135)*

113. ____ does not inhibit release of antidiuretic hormone.
A. Hypo-osmolarity **B.** Hypercolemia
C. Ethanol **D.** Phenytoin
E. hypoglycemia *(CU9-1137)*

114. If plasma level exceeds ___ mg%, the filtered load exceeds the reabsorptive threshold and urinary glucose is detected.
A. 180 **B.** 200
C. 250 **D.** 300 *(CU9-1140)*

115. Pseudohyponatremia is most commonly seen with abnormal elevation of serum lipids or glucose. For every 1 gm/dL increase in triglyceride, measured sodium is decreased by ___mEq/Lt, and for every 100 mg/dL increase in glucose, measured sodium is decreased by 1.6 mEq/Lt.
A. One **B.** Two
C. Three **D.** Four *(CU9-1147)*

116. The sentinel biochemical event in renal ischemia is the ____.
A. Depletion of ATP
B. Elevation of ADP
C. Elevation of lactic acid
D. Elevation of inosine, and hypoxanthine *(CU9-1330)*

117. In cryoablation of renal lesions, temperature less than ___ are necessary for cell death.
A. 20°C **B.** 25°C
C. Minus 10°F **D.** Minus 20°C *(CU9-1808)*

118. The enzyme phenylethanolamine-N-methyl-trasferase (PNMT), which catalyses the methylation of norepinephrine to form epinephrine is almost solely localised to the ___.
A. Liver
B. Adrenal medulla
C. Adrenal cortex
D. Peripheral adipose tissue *(CU9-1828)*

119. The ionic conduction underlying pacemaker activity in the upper urinary tract is due to the opening and slow closure of voltage-activated ____ type Ca^{2+} channels which are amplified by prostanoids.
A. K **B.** L
C. M **D.** N *(CU9-1895)*

113 E 114 B 115 B 116 A 117 A 118 B 119 B

120. The following agent causes more marked ureteral relaxation and aid in stone passage.

A. Theophylline **B.** Rolipram
C. Nifedipine **D.** Deflazacort
E. Tamsulosin *(CU9-1916)*

121. The following drug potentiate the contractile effect of $BaCl_2$ on the ureter unlike others mentioned.

A. Ampicillin **B.** Histamine
C. Serotonin **D.** Carbachol
E. Gentamicin **F.** Tetracycline *(CU9-1920)*

122. The 'hammock hypothesis' that abdominal pressure transmitted through the proximal uretra presses the anterior wall against the posterior wall is one of the processes of urinary continence in women is proponed by:

A. DeLancey **B.** Ashok Kumar
C. Krishnamurty **D.** Bazeed *(CU9-1936)*

123. Because the ureter is a vesicoelastic structure, the resting or contractile force developed at any given length depends on the direction in which the change in length is occurring and on the rate of length change. This is referred to as ____.

A. Hysteresis **B.** 13, 87
C. 50, 50 **D.** 65, 35 *(CU9-1902)*

124. In the male, the rhabdoshincter consists of 35% fast-twich and 65% slow-twich fibers. In the female the ratio of slow-twich to fast-twich fibers is ____% fast-twich, and ____% slow-twich.

A. 87, 13 **B.** 13, 87
C. 50, 50 **D.** 65, 35 *(CU9-1937)*

125. Brain imaging studies have indicated that micturition is controlled predominantly by the ___ side of the brain.

A. Left **B.** Right
C. Front **D.** Back (*CU9-1946*)

126. Parathyroid hormone-related peptide is manu-factured by the ___.

A. Bladder smooth muscle
B. Liver
C. Hypothalamus
D. Parathyroid *(CU9-1956)*

127. In human, detrusor ___ receptors are throught to be the most important for contraction.

120 B 121 F 122 A 123 A 124 B 125 B 126 A 127 C

A. M1 **B.** M2
C. M3 **D.** M4 *(CU9-2071)*

128. Only ____% of the total serum testosterone is unbound. It is only this testosterone that is available for prostate uptake for metabolism to DHT.
A. Two **B.** Three
C. Four **D.** Five *(CU9-2686)*

129. DHT is the major form of testosterone found within the prostate and is ____ fold higher than testosterone.
A. Two **B.** Three
C. Four **D.** Five
E. Six *(CU9-2686)*

130. Men older than 50 years may have an increase in total plasma estradiol levels of approximately 50% with minimal change, ____ , in free estradiol level.
A. < 20 **B.** < 30
C. < 20 **D.** < 10 *(CU9-2688)*

131. Seminal vesicle secretion contains varying amounts of free sugars: 1. Fructose 2. Glucose 3. Sorbitol 4. Ribose 5. Sucrose
A. All except 5 **B.** Only 1
C. Only 1, 2, and 3 **D.** All 1, 2, 3, 4, and 5

132. ___is/are not required in the coagulation process of semen.
A. Sodium citrate **B.** Heparin
C. Fibrinogen **D.** Factor XII
E. All of the above **F.** Only A, B, and C *(CU9-2725)*

133. The mature average prostate gland is ___ gm and remains relatively constant until about age 50.
A. 18 **B.** 20–25
C. 27–32 **D.** 15–18 *(CU9-2886)*

134. The estradiol is ___ fold more potent at suppressing LH and FSH secretion by the pituitary compared to testosterone.
A. 1000 **B.** 700
C. 5000 **D.** 500 *(CU9-3083)*

135. Atrial natriuretic peptide possesses the following functions except:
A. Increase in GFR **B.** Natriuresis
C. Diuresis **D.** Renal vasoconstriction *(CU9-3158)*

128 A 129 D 130 D 131 A 132 E 133 B 134 A 135 D

136. By the age of _____ the voiding pattern in children is very similar to that it in an adult and usually comprises 4 to 6 voids per day.

A. 10 **B.** 12
C. 14 **D.** 16 *(CU9-3606)*

137. For older children, the most widely accepted formula for calculating the functional bladder capacity is:

A. Koff-bladder capacity in ml = (Age in years + 2) × 30
B. Holmdahl-bladder capacity in ml = 38 + 2.5 x Age in months
C. Kaefer bladder capacity in ml = 32 (2 x age in years + 2)
D. Hjalmas*-bladder capacity in ml = 30 (age in years/2 + 6)
(CU9-3606-7, 3657)

138. By the age of _____ most children develop the adult pattern of urinary control and will be dry both day and night.

A. 2-3 years **B.** 3-4 years
C. 4-5 years **D.** 5-6 years *(CU9-3608)*

139. 3 years of age, 90% of foreskins can be retracted, and less than ____ % of males have phimosis by 17 years of age.

A. 1 **B.** 5
C. 10 **D.** 15 *(CU9-3746)*

140. Estrogen synthesis is detectable in the female embryo just after _____ weeks of gestation.

A. 6 **B.** 8
C. 10 **D.** 12 *(CU9-3804)*

141. Laboratory values that do not change with age.

A. Creatinine clearance **B.** Serum electrolytes
C. $PaCO_2$ **D.** Platelet count *(SU16-60t)*

142. Laboratory values that do change with age.

A. Serum creatinine **B.** Leukocye count
C. PaO_2 **D.** Alkaline phosphatase *(SU16-60t)*

136 B 137 A 138 B 139 A 140 B 141 A 142 A

3 Reproduction

1. **Melatonin exhibits a circadian pattern in the human, with _____ daytime and _____ nighttime levels, and has been suggested to have potential functions in sexual maturation:**
   A. Low; high
   B. High; low
   C. This statement is false *(CU 179)*

2. **Male opiate addicts have low LH and testosterone levels and are sometimes sexually impotent. This statement is:**
   A. True
   B. False *(CU 179)*

3. **Although gonadotropin releasing hormone (GnRH) has been identified in many areas of the CNS, it is most concentrated in the ____ basal region of the hypothalamus:**
   A. Lateral **B.** Medial
   C. Superior **D.** Inferior *(CU 180)*

4. **LH and FSH share a common alpha peptide chain with which two of the following hormones:**
   A. Growth hormone **B.** Prolactin
   C. TSH **D.** hCG *(CU 181)*

5. **The LH radioimmunoassay that is generally available does distinguish between LH and hCG. This statement is:**
   A. True
   B. False *(CU 181)*

6. **Neoplastic production of gonadotropin is best assessed by _____ assay which does not detect the normal LH levels in men:**
   A. Beta hCG
   B. Alpha hCG
   C. Immuno
   D. Delta hCG *(CU 181)*

1 A 2 A 3 B 4 C,D 5 B 6 A

7. Although the concentration of estradiol in the blood of men is relatively low compared with testosterone, it is a much more potent inhibitor of LH and FSH secretion, which is approximately ____ fold:
A. 100 **B.** 500
C. 1000 **D.** 1500 *(CU 182)*

8. Inhibin is produced by which two type of cells:
A. Sertoli cells of testis
B. Granulosa cells of the ovary
C. Leydig cells
D. Purkinje cells
E. Sustentacular cells *(CU 183)*

9. Spermatogenesis is a complex process whereby a primitive stem cell, the type A spermatogonium, passes through a complex series of transformations to give rise to spermatozoa. In men this takes:
A. 75 days **B.** 67 days
C. 73 days **D.** 74 days *(CU 183, CMC, JIPMER)*

10. Fetal serum LH and FSH seem to peak at:
A. Early gestation **B.** Midgestation
C. Late gestation *(CU 184)*

11. Newborns with hypogonadotrophic hypogonadism may be identified by measuring the testicular volume sequentially during the first three months of life. Normal children apparently ____ the testicular volume during this period:
A. Double **B.** Triple
C. Quadruple **D.** Pentaple *(CU 186)*

12. Although the mechanism of action of clomiphene in increasing serum levels of FSH and LH is not absolutely clear, most evidence indicates that it interferes at:
A. Peripheral level **B.** Hypothalamic level
C. Both A and B *(CU 186)*

13. The testicular parenchyma is surrounded by a capsule made up of three layers; *tunica vaginalis*, *tunica albuginea* and *tunica vasculosa*. Which layer contains large numbers of branching smooth muscle cells:
A. *T. vaginalis*
B. *T. albuginea*
C. *T. vasculosa*
D. None of the above *(CU 190)*

7 C 8 A,B 9 C 10 B 11 A 12 B 13 B

14. Interstitial tissue is composed of Leydig cells, mast cells and macrophases as well as nerves and blood and lymph vessels. In humans, interstitial tissue takes up ____ per cent of the total testicular volume:

A. 10-20 **B.** 20-30
C. 30-40 **D.** 40-50 *(CU 190)*

15. Lennox and Ahmad (1970) estimated that the combined length of the 600 to 1200 seminiferous tubules in the human testis is approximately:

A. 100 meters **B.** 150 meters
C. 200 meters **D.** 250 meters *(CU 190)*

16. The human testicular parenchyma is provided with approximately _____ ml of blood per 100 gm of tissue per minute:

A. 5 **B.** 6
C. 7 **D.** 8
E. 9 **F.** 10 *(CU 190)*

17. The arterial supply to the human testis and epididymis is from:

A. Internal spermatic artery
B. Deferential artery
C. External spermatic or cremasteric artery
D. A and C
E. A, B and C *(CU 191)*

18. The veins in the testis are unusual in that:

A. They are much more thicker
B. They are thinnest in the cord at rings
C. They do not run with the corresponding intratesticular arteries
D. In reality they do not have a thermoregulatory function *(CU 192)*

19. Stereologic analysis shows that a human testis from a 20-year-old man contains approximately 700 million Leydig cells. Leydig cells alone account for about _____ per cent of the total volume of the testis:

A. 5 to 12 **B.** 12 to 15
C. 15 to 20 **D.** 20 to 23 *(CU 192)*

20. The principal steroid produced by the testis is:

A. Testosterone
B. Dihydrotestosterone

14 B 15 D 16 E 17 E 18 C 19 A 20 A

C. Androstenedione
D. Dehydroepiandrosterone
E. Pregnenolone
F. Progesterone *(CU 193)*

21. In the male, approximately 8 mg of testosterone is produced daily. About ___ per cent is produced by the Leydig cells and the rest by the adrenal:
A. 75 **B.** 80
C. 85 **D.** 90
E. 95 *(A Lange Medical Book, Basic and Clinical Pharmacology, 3rd edn, 1987, p. 478)*

22. The primary and acute regulation of testosterone production is dependent on:
A. FSH **B.** Prolactin
C. LH **D.** Activin
E. Inhibin *(CU 194)*

23. Testosterone reaches a maximum concentration during the _____ decade of life, then reaches a plateau, and declines thereafter:
A. 1st and 2nd **B.** 2nd or 3rd
C. 3rd and 4th **D.** None of A, B, C *(CU 194)*

24. Sertoli cell secretory products include laminin, ceruloplasmin, transferrin, sulfated glycoproteins 1 and 2, plasminogen activator, somatomedin like substances, T-proteins, inhibin, H-Y antigen, clusterin, cyclic proteins, growth factors, somatomedin and androgen-binding protein. It also secretes which two types of collagen:
A. Type I **B.** Type II
C. Type III **D.** Type IV *(CU 196)*

25. The blood testis barrier is a specialised junctional complex between adjacent ____ cells, which separates the basal compartment from the abdominal compartment:
A. Sertoli **B.** Leydig
C. Sustentacular **D.** Purkinje *(CU 197)*

26. The epithelium of the seminiferous tubule is populated by cells that give rise to approximately _____ spermatozoa daily in the human male:
A. 20 million **B.** 50 million
C. 123 million **D.** 140 million *(CU 198)*

21 E 22 C 23 B 24 A,D 25 A 26 C

27. Differentiation of the genital ridge to form the testis is dependent on the presence of germ cells. This statement is:
A. True **B.** False *(CU 198)*

28. The primitive germ cells of the undifferentiated gonad are referred to as:
A. Gonion **B.** Gonocytes
C. Gonyoncus **D.** Oogonocytes *(CU 199)*

29. From birth to approximately ____ years of life, there appears to be very little morphologic change in the human testis:
A. 5 **B.** 6
C. 7 **D.** 8 *(CU 199)*

30. Primary spermatocytes (that will undergo meiosis) are formed by the mitotic division of:
A. Type B spermatogonia
B. Pale type A spermatogonia
C. Dark type A spermatogonia
D. Preleptotene primary spermatocytes *(CU 200)*

31. The proliferative phase of spermatogenesis (differentiation of pale type A spermatogonia to B spermatogonia) is initiated four times (every 16 days) during the period required for a pale type A spermatogonium to differentiate into a spermatozoon. The entire spermatogenic process in man requires approximately how many days:
A. 64 **B.** 74
C. 84 **D.** 72 *(CU 201)*

32. The entire length of the epididymal tubule (3 to 4 meters) is coiled and encapsulated within the sheath of connective tissue of the tunica:
A. Vaginalis
B. Albuginea
C. Vasculosa *(CU 203)*

33. There are 8 to 12 ductuli efferentes at the:
A. Caput epididymis
B. Corpus epididymis
C. Cauda epididymis *(CU 203)*

34. In human, the caput and corpus epididymis receive arterial blood via a single branch from testicular artery. The cauda epididymis is supplied by branches from ____ artery, which also communicates with the arteries of the caput epididymis:

27 B 28 B 29 C 30 A 31 A 32 A 33 A 34 A

A. Deferential artery
B. Internal spermatic artery
C. Cremasteric artery
D. External spermatic artery *(CU 204-205)*

35. The vena marginalis epididymis of Haberer is formed when the venous drainage from which part/parts of the epididymis join(s):
A. Caput **B.** Corpus
C. Cauda **D.** Corpus and cauda
E. Corpus and caput *(CU 205)*

36. In humans, approximately half of the total number of epididymal spermatozoa are stored in the:
A. Caput region **B.** Corpus region
C. Caudal region **D.** None of the above *(CU 206)*

37. The human spermatozoon is approximately ___ um in length:
A. 40 **B.** 50
C. 60 **D.** 70 *(CU 212)*

38. The lumen of the ductus deferens is approximately 0.05 cm in diameter; and the length is:
A. 30 to 35 cm **B.** 35 to 40 cm
C. 25 to 30 cm **D.** 50 to 55 cm *(CU 213)*

39. The ductus deferens receives nerve fibres from both the sympathetic and parasympathetic nervous system. Which supply is of minor importance in the motor activity of the ductus deferens:
A. Adrenergic supply **B.** Cholinergic supply
C. None of the above *(CU 213)*

40. Pencil cells are found in the lining of the lumen of the:
A. Ductus deferens
B. Epididymis
C. Ductuli efferentes
D. Proximal convoluted tubule
E. Loop of Henle *(CU 213)*

41. Abnormal overgrowth of the human prostate resulting in benign prostatic hyperplasia occurs in almost 80 per cent of the male population by the age of:
A. 60 **B.** 80
C. 70 **D.** 90
E. 50 *(CU 221)*

35 D 36 C 37 C 38 A 39 B 40 A 41 B

42. The secretion of the sex accessory tissues, such as the prostate, seminal vesicles, and Cowper's gland constitute most of the volume and chemical composition of the seminal plasma: fluids from the other parts of the male reproductive tract, such as the testes and epididymis, make-up less than per cent of the total semen volume:

A. 5 **B.** 4
C. 3 **D.** 2
E. 1 *(CU 222)*

43. The seminal vesicles are absent in the:

A. Dog **B.** Cat
C. Bear **D.** Aquatic mammals
E. All of the above **F.** None of the above *(CU 223)*

44. The seminal vesicles weigh _____ in the humans and develop as paired pouches (capacity, 4.5 ml each), forming from the vas deferens:

A. 4-5 gm **B.** 8-9 gm
C. 6-7 gm **D.** 10-12 gm *(CU 225)*

45. At the midpoint of the prostatic urethra between the apex of the prostate and the bladder neck (i.e. at the upper end of the verumontanum), the posterior wall of the urethra is kinked anteriorly is such a way that the entire proximal urethra is angled ____ degrees anterior to the course of the distal urethral segment:

A. 25 **B.** 30
C. 35 **D.** 40
E. 45 *(CU 226)*

46. The anterior fibromuscular stroma of the prostate constitutes up to one third of the total bulk of the prostate. It is entirely lacking in glandular elements. This statement is:

A. True **B.** False *(CU 226)*

47. Which is the largest anatomical subdivision of the prostate?

A. Peripheral zone **B.** Central zone
C. Preprostatic tissue **D.** Transition zone *(CU 226)*

48. The peripheral zone contains ____ per cent of the total glandular tissue of the prostate, and it is in this region that almost all carcinomas arise. Further-more, this is the tissue sampled in most random biopsies of the prostate:

A. 1 **B.** 5
C. 25 **D.** 75 *(CU 226)*

42 E 43 E 44 B 45 C 46 A 47 A 48 D

49. Which zone of the prostate surrounds the ejaculatory duct?
A. Peripheral **B.** Central
C. Transition **D.** Preprostatic tissue *(CU 226)*

50. McNeal feels that the architecture and histological features of the_____zone closely resemble those of seminal vesicles, suggesting that this zone could be of Wolffian duct in origin:
A. Peripheral **B.** Central
C. Preprostatic tissue **D.** Transition *(CU 226)*

51. Which is the smallest region of the prostate, and which has also sphincteric function at the time of ejaculation to prevent the reflux of seminal fluid into the bladder?
A. Peripheral **B.** Central
C. Preprostatic tissue **D.** Transition *(CU 226)*

52. Which zone of the prostate along with the other periurethral glands is the exclusive site of origin of the benign prostatic hyperplasia, which also make up less than 5 per cent of the mass of the normal glandular prostate?
A. Peripheral **B.** Central
C. Preprostatic tissue **D.** Transition *(CU 227)*

53. There are three types of significant population of neuro-endocrine (APUD) cells residing among the more abundant secretory epithelium in the normal prostate gland containing:
A. Insulin, glucagon, gastrin, somatostatin
B. Serotonin, TSH, calcitonin, somatostatin
C. Calcitonin, glucagon, VIP, somatostatin
D. Somatostatin, parathormone, TSH, calcitonin *(CU 228)*

54. The connective tissue of the prostate is primarily collagen of types:
A. I and III **B.** I and II
C. III and IV **D.** I and IV *(CU 230)*

55. DeKlerk (1983) isolated and quantitated important glycosaminoglycans (GAGs) from the normal and benign human prostates. These are dermatan sulfate (40%), heparin (20%), chondroitin (16%), and hyaluronic acid (20%). Out of them chondroitin sulfate increases with BPH, and _____ is absent in fetal prostates:
A. Dermatan sulfate **B.** Heparin
C. Chondroitin **D.** Hyaluronic acid *(CU 230)*

49 B 50 B 51 C 52 D 53 B 54 A 55 A

56. The prostate requires continued presence of serum testosterone for its function, which is a prohormone and that must be converted by metabolism within the ____ into dihydrotestosterone (DHT):

A. Liver **B.** Kidneys
C. Prostate **D.** Seminal vesicles *(CU 230)*

57. Dihydrotestosterone is the major form of androgen found within the prostate gland (5 ng/g tissue) and is fivefold higher than testosterone. The potency of DHT is _____ times as potent as testosterone:

A. 1.5 to 2.5 **B.** 2.5 to 5.0
C. 5 to 10 **D.** 50 *(CU 232)*

58. In an average ejaculate volume of 3 ml, the major contribution to the volume of the seminal plasma comes from the seminal vesicles, 1.5 to 2 ml: the prostate, 0.5 ml; and Cowper's gland and glands of Littre, 0.1 to 0.2 ml. Which fraction of the human ejaculate are rich in sperm, although the spermatozoa component is less than one per cent of the total ejaculate volume:

A. First **B.** Midfraction
C. Last **D.** Same in all the fractions *(CU 251)*

59. Tremendous amounts of citric acid—almost 100 times higher than that seen in other soft tissues are formed by the:

A. Prostate **B.** Seminal vesicles
C. Kidneys **D.** Cowper's gland *(CU 251)*

60. All the following statements are true, *except:*

1. **The seminal vesicles secretion contains, in addition to fructose, smaller amounts of other sugars such as glucose, sorbitol, ribose, and fructose**
2. **Level of fructose in seminal plasma is 200 mg/dl approximately.**
3. **Fructose levels are under the androgenic regulation**
4. **Factors such as storage, frequency of ejaculation, blood glucose levels, and nutritional status do not affect the fructose concentration in seminal plasma**
5. **There is wide variation in the fructose levels of seminal plasma in different semen samples from the same patient.**

A. 1 **B.** 2
C. 3 **D.** 4
E. 5 *(CU 252)*

56 C 57 A 58 A 59 A 60 D

61. The richest source of spermine (a polyamine) in the body is:
A. Prostate **B.** Seminal vesicles
C. Cowper's gland **D.** Glands of Littre *(CU 252)*

62. The characteristic odor of the semen is due to:
A. Polyamines **B.** Aldehyde products of polyamines
C. Phosphorylcholine **D.** Prostaglandins *(CU 252)*

63. There are 16 different prostaglandins present in human semen. The E group of prostaglandins is the major component in male reproductive tract: the F group predominates in the female system. The richest source of prostaglandins in the human are the:
A. Prostate **B.** Seminal vesicles
C. Kidneys **D.** Adrenal medulla *(CU 253)*

64. The high level of zinc in human seminal plasma appear's to originate primarily from secretions of the ____, which has the highest concentration of zinc of any organ, and oral intake of zinc does not alter its zinc levels:
A. Prostate **B.** Seminal vesicles
C. Epididymis **D.** Seminiferous tubules *(CU 253, CMC)*

65. The prostate specific antigen (PSA) (a glycoprotein) is detected only in the epithelial cells of the prostate, the possible biologic role of which would be in:
A. Clotting of semen **B.** Lysis of the ejaculate clot
C. Sperm nutrition *(CU 254)*

66. The seminal vesicle-specific antigen, the major clott-ing protein of semen. Is the:
A. Beta-inhibin **B.** Beta-microseminoprotein
C. Semenogelin **D.** Seminin *(CU 256)*

67. Few drugs reach concentrations in the prostatic secretion that approach or surpass their concentration in blood, but some exceptions are the:
A. Erythromycin and oleandromycin
B. Sulfonamides **C.** Chloramphenicol
D. Tetracycline **E.** Clindamycin
F. Trimethoprim **G.** All of the above *(CU 258)*

68. The richest source of spermine in the body is:
A. Prostate **B.** Seminal vesicles
C. Cowper's gland **D.** Spermatic vein *(CU 7 1391)*

61 A 62 B 63 B 64 A 65 B 66 C 67 G 68 A

4 Diagnostic Technique

1. **Nocturia is nocturnal frequency. Normally adults arise no more than how many times at night to void:**
   A. One **B.** Two
   C. Three **D.** Four *(CU 309)*

2. **Haematospermia is the presence of blood in the seminal fluid. Blood arising from the inflammation of the prostate typically occurs in the initial portion, whereas blood arising from that of seminal vesicles occurs later. A careful rectal examination should be done to exclude the presence of____:**
   A. Tuberculosis of prostate
   B. Prostatic carcinoma
   C. Nonspecific inflammation of the prostate and seminal vesicles
   D. B and C
   E. All of A, B and C *(CU 311)*

3. **Pneumaturia is the passage of gas in the urine. Its causes include:**
   A. Diabetes mellitus
   B. Diverticulitis
   C. Carcinoma of the sigmoid colon
   D. Crohn's disease
   E. All of the above except A
   F. All of the A, B, C and D *(CU 311)*

4. **The most common cause of chyluria is:**
   A. Filariasis
   B. Retroperitoneal tumours
   C. Trauma
   D. Tuberculosis *(CU 311)*

5. **A normal bladder in the adult cannot be palpated or percussed until there is at least _____ ml of urine in it:**
   A. 100 **B.** 150
   C. 200 **D.** 250 *(CU 312)*

1 B 2 E 3 F 4 A 5 B

6. The testes are normally oval in shape, firm, and smooth: in adults they measure about 6 cm in length and 4 cm in width. They are suspended in the scrotum, with the right testis normally ____ to the left. The epididymis lies posterior to the testis:

A. Anterior **B.** Posterior
C. At the same level **D.** Medially placed *(CU 313)*

7. Rectal examination to done best with the patient:

A. Standing and bent over the examination table
B. In the knee-chest position
C. In Sim's position
D. Both A and B
E. In dorsal position *(CU 314)*

8. In children younger than ____ years of age, it is normal for the foreskin of the penis to be unretractable behind the glans penis:

A. 2 **B.** 3
C. 4 **D.** 5 *(CU 315)*

9. Which of the following is the most useful criterion in distinguishing torsion from epididymitis:

A. History of sudden onset of pain and swelling in the involved testis
B. On physical examination, it is difficult to distin-guish the testis from the epididymis because of the localised swelling
C. Elevation of the scrotum relieves the pain in epididymitis, but increases it in torsion of the spermatic cord
D. Age of the patient *(CU 316)*

10. Which of the following organisms is not an urea splitter:

A. *Proteus mirabilis* **B.** *Klebsiella*
C. *Pseudomonas* **D.** Providencia
E. *Staphylococcus* **F.** *E.coli* *(CU 317)*

11. The 'gold standard' for urinary protein analysis is the:

A. Kingsbury-Clark sulfosalicylic acid
B. Biuret test
C. Dipstick reagent test
D. Urinary precipitation test *(CU 318)*

12. Fasting, starvation diets, postexercise states, and pregnancy all produce ketones in the urine. Ketones are usually:

A. Found in the urine
B. Not found in the urine *(CU 319)*

6 A 7 D 8 D 9 D 10 F 11 A 12 B

13. Griess test is done to detect ____ in the urine:
A. Glucose **B.** Ketones
C. Nitrites **D.** Urobilinogen and bilirubin *(CU 319)*

14. How many leukocytes per high power field are now accepted as the cut-off level for significant pyuria:
A. Three **B.** Four
C. Five **D.** Six *(CU 320)*

15. It has been well-documented that the normal indi-vidual excretes approximately ____ erythrocytes per millilitre of urine:
A. 200 **B.** 500
C. 100 **D.** 1000 *(CU 321)*

16. Each bacterium seen per high power field signifies a bacterial count of more than ____/ml of urine:
A. 5,000 **B.** 10,000
C. 20,000 **D.** 50,000 *(CU 322)*

17. Which is the basic matrix of all renal casts:
A. Tamm-Horsfall protein
B. Mucoprotein
C. Albumin
D. Globulin *(CU 322)*

18. Appearance of _____ in the urine is diagnostic of this condition:
A. Urate crystals **B.** Cystine crystals
C. Oxalate crystals **D.** Hyaline casts *(CU 323, CMC)*

19. ____ have been demonstrated to be characteristic of glomerulonephritis:
A. Dysmorphic RBCs **B.** Glitter cells
C. Pale cells **D.** Renal casts *(CU 328)*

20. Flow cytometry of urine is done for:
A. Detection of uroepithelial malignancies
B. Measurement of urethral and bladder pressure profile
C. Measurement of urinary flow rate
D. All of the above *(CU 329, BHU)*

21. Presence of _____ in the expressed prostatic secretion characterises the postinfection prostatic fluid:
A. Clumps of leukocytes
B. Clumps of prostatic granules
C. Oval fat macrophages
D. All of the above *(CU 329)*

13 C 14 A 15 D 16 C 17 A 18 B 19 A 20 A 21 C

22. The peripheral zone is the most frequent site of origin of prostate cancer, accounting for about _____ per cent of cancers:
A. 60 **B.** 70
C. 80 **D.** 90 *(CU 343)*

23. Most prostatic calculi lie at the boundary of:
A. Peripheral zone **B.** Central zone
C. Transition zone *(CU 343)*

24. Which to true about the following statements:
1. **'Beak sign' and 'tornado sign' are the terms given to certain ultrasonographic features of the prostate gland.**
2. **There is no sonographic pattern typical of acute or chronic prostatis**
3. **Typical appearance of prostate cancer on ultra-sonography is hypoechoic relative to the normal echo pattern of the peripheral zone**
4. **Wheeler (1989), described three types of seminal vesicle invasion by prostate cancer; out of which type III is the most common.**

A. 1, 2, 3 are true
B. All of 1, 2, 3, 4 are true
C. Only 4 is true
D. Only 2 and 3 are true *(CU 347-370)*

25. "Adhesion sign, nipple sign and posterior convexity sign" are all ultrasonographic signs of:
A. Prostatic invasion by seminal vesicle cancer
B. Seminal vesicle invasion by prostatic cancer
C. Normally appearing prostate and seminal vesicles
D. Wheeler's different types of invasion of seminal vesicles *(CU 370-372)*

26. After hormone therapy in prostatic cancer, the prostate decreases in volume dramatically, with the greatest change occurring during the:
A. First one month **B.** First two months
C. First three months **D.** First six months *(CU 372)*

27. For the determination of the residual urine volume, the bladder ultrasonography is more accurate than catheterisation. This statement is:
A. True **B.** False *(CU 381)*

28. _____ remain the gold standard for the follow-up of patients with bladder cancer:

22 B 23 C 24 A 25 B 26 C 27 B 28 B

A. Cystoscopy
B. Cystoscopy and cytology
C. Cystoscopy, cytology and biopsy *(CU 381)*

29. One of the vasoactive drug or drug combinations is injected into one of the corpora cavernosa with a 27 gauge needle to evaluate erectile vascular function; a tourniquet is placed at the base of the penis immediately before the injection and left for ____ minutes:
A. One **B.** Two
C. Three **D.** Four *(CU 387)*

30. According to the current NCRP (National council on radiation protection and measurements), maximum permissible dose equivalent of occupational exposure for a fertile woman, with respect to fetus, is____ in gestation period:
A. 1.0 rem **B.** 0.5 rem
C. 12 cGy **D.** 5.0 rad *(CU 400)*

31. Which of the following is an ionic contrast media:
A. Iohexol **B.** Iopamidol
C. Ioxaglate **D.** Iothalamate *(CU 415, BHU)*

32. Which is a nonionic contrast media:
A. Iodamide **B.** Iohexol
C. Iothalamate **D.** Diatrizoate *(CU 414, JIPMER)*

33. There is lesser incidence of reaction with the newer media (dimers and ratio-3, three iodine atoms; one particle) in contrast to ionic monomeric tri-iodinated ratio-1.5 media: this is partly because of their ____:
A. Higher osmolality
B. Lower osmolality
C. Lower iodine content
D. Higher iodine content *(CU 413)*

34. Large doses of contrast medium _____ diuresis:
A. Increases
B. Decreases
C. Does not affect the rate of *(CU 413)*

35. Normally, contrast material is excreted rapidly and the calices are visualised within _____ minutes:
A. 1 **B.** 2
C. 3 **D.** 4 *(CU 418)*

29 B 30 B 31 D 32 B 33 B 34 A 35 B

36. The major findings in the urogram of a hypertensive individual that suggests renovascular hypertension are:
A. A small kidney (smaller than opposite side by more than 1.5 cm)
B. Delayed appearance of the nephrogram and contrast material in the calyces
C. Hyperconcentration in the late films
D. A and B
E. B and C
F. A, B and C *(CU 430)*

37. A kidney that fails to excrete radiographically detectable amounts of contrast agent into its collecting system is termed:
A. Nonexcreting **B.** Nonvisualising
C. Nonfunctioning *(CU 431, CMC)*

38. After urography, a routine postvoiding film of the bladder area is frequently obtained in men more than 60 years of age to estimate residual urine; this study is valuable provided that the patient has voided as much as possible, and the film is obtained within ____ minutes after the patient has voided;
A. One **B.** Two
C. Three **D.** Four
E. Five *(CU 431)*

39. Patients with history of allergic reactions have approximately _____fold increase in contrast associated reactions:
A. One **B.** Two
C. Three **D.** Four *(CU 433)*

40. Patients with histories of reactions to similar contrast media have a ____ fold greater chance of reaction after subsequent injection:
A. One **B.** Two
C. Three **D.** Four *(CU 433)*

41. No arbitrary level of serum creatinine is estimated above which the urogram has no diagnostic value. As a rule of thumb, urography is probably wasteful in patients with medicorenal disease whose creatinine levels are above ___:
A. 1.0 mg/dl **B.** 2.0 mg/dl
C. 3.0 mg/dl **D.** 4.0 mg/dl *(CU 433)*

42. Adequate visualisation of the entire bladder is most reliably achieved by:

36 F 37 B 38 C 39 B 40 C 41 D 42 A

A. A retrograde cystogram
B. An antegrade cystogram *(CU 435)*

43. The meglumine salts of diatrizoate and iothalamate are almost universally used for cystourethrography. Solutions of 15 per cent are generally adequate for cystography, whereas ___per cent solutions usually render adequate opacification of the urethra:
A. 20 **B.** 30
C. 40 **D.** 50 *(CU 436)*

44. 'Spin' is a term which comes in the basics of:
A. Ultrasonography **B.** CT scan
C. MRI **D.** Doppler ultrasonography *(CU 486)*

45. A 35-year-old female presents to the urologist with left flank pain. Intravenous urography demonstrates an exophytic 3 cm left upper pole mass. Ultrasonography demonstrates a homogeneous, hyperechoic lesion with no through transmission. The next step in the imaging work-up should be:
A. Contrast enhanced MRI
B. ^{99m}Tc DTPA renogram
C. Follow-up ultrasound in six months
D. No further work-up is needed
E. Unenhanced CT to confirm a fat containing lesion
(AUA 94-1)

46. Imaging features of benign renal lesions on contrast enhanced CT includes:
A. Thick or nodular walls
B. Chunky, irregular calcification
C. No enhancement
D. Heterogeneous attenuation
E. Ill-defined margin with normal parenchyma *(AUA 94-1)*

47. An 83-year-old female is referred for a second opinion regarding a 6 cm right renal lesion. Ultra-sound demonstrates a heterogeneous, hypoechoic right upper pole renal mass adjacent to the liver parenchyma. The next step in the imaging work-up is:
A. Color and pulse Doppler ultrasonography of the renal veins and inferior vena cava
B. CT examination with and without IV contrast media
C. Renal angiography
D. Contrast enhanced spin echo MRI
E. Spin echo and gradient recalled echo MRI *(AUA 94-1)*

43 B 44 C 45 E 46 C 47 B

48. CT reveals a 3.2 cm left renal mass with well-defined borders, and numerous thin septa surrounding low attenuation (16 HU) spaces. There is no enhancement. According to Bosnaik criteria, this is a:

A. Category I lesion **B.** Category II lesion
C. Category III lesion **D.** Category IIIa lesion
E. Category IV lesion *(AUA 94-1)*

49. The fundamental advantage of spiral CT is that it can eliminate respiratory misregistration. This is accomplished with all of the following, *except:*

A. Imaging during a single breath hold
B. Slip ring technology
C. Incremental table movement in between X-ray exposures
D. Continuous rotating CT X-ray tube
E. New software for image reconstruction *(AUA 94-1)*

50. Advantage of MRI over CT in the evaluation of renal masses include:

A. Shorter duration of examination
B. Depletion of vascular invasion
C. Depiction of adenopathy
D. Improved spatial resolution
E. Improved contrast enhancement *(AUA 94-1)*

51. Characteristics of benign renal lesions on ultrasound include:

A. Internal septations
B. Distortion of adjacent parenchyma
C. Irregular echogenic foci with shadowing
D. Well-defined anechoic mass
E. Heterogenous echotexture *(AUA 94-1)*

52. The chief limitation of cyst puncture and aspiration is which of the following:

A. Little or no role in category III lesions
B. Low accuracy rates
C. Negative cytology does not exclude malignancy
D. Inability to rule out infection
E. Potential for needle tract seedling *(AUA 94-1)*

53. A 67-year-old insulin dependant diabetic male is referred for a 4 cm left renal mass on ultrasound. BUN is 56 mg/dl and Cr 2.2 mg/dl. The most appropriate work-up by imaging is:

48 B 49 E 50 B 51 D 52 C 53 D

A. Contrast enhanced MRI
B. Contrast enhanced CT and MRI
C. Renal mass biopsy
D. Contrast enhanced CT
E. Repeat ultrasound *(AUA 94-1)*

54. **Gadolinium DTPA is used in MRI primarily because it is:**
A. Paramagnetic
B. Required to visualise vasculature
C. Slightly less nephrotoxic than iodinated contrast material
D. Easily administered orally
E. Able to visualise urothelium comparable to IVU
(AUA 94-1)

55. The antigens most likely responsible for type I allergic reactions to natural latex rubber products are:
A. Proteins **B.** Accelerators
C. Antioxidants **D.** Histamines
E. Kinins *(AUA 94-14)*

56. Which of the following test results would a patient with immediate hypersensitivity to natural latex rubber be most likely to have?
A. A positive radio-allergosorbent test (RAST) and a negative skin prick test
B. A negative RAST and a positive skin prick test
C. A positive skin prick test and a negative intradermal test
D. A positive intradermal test at 15 minutes
E. A positive skin prick test at six hours *(AUA 94-14)*

57. Which patients would probably have the highest risk of experiencing an anaphylactic reaction after manipulation of the bowel by a natural latex rubber-gloved hand during a surgical procedure?
A. A 15-year-old male with spina bifida and a negative radio-allergosorbent test (RAST) to natural latex rubber
B. A 20-year-old female with atopy and a negative skin prick test to natural latex rubber
C. A 40-year-old male nurse with mild hand eczema and a negative RAST to natural latex rubber
D. Both A and C
E. Both B and C *(AUA 94-14)*

54 A 55 A 56 D 57 E

58. The combination of real time ultrasound imaging with pulsed Doppler is called:
A. A flowmeter **B.** Duplex sonography
C. Spectral analysis **D.** Continuous wave sonography
E. Colour ultrasound *(AUA 93-21)*

59. What renal artery to aortic velocity ratio suggests renal artery stenosis?
A. More than 3.5 **B.** More than 13.5
C. More than .135 **D.** More than 5.3
E. More than 1.3 *(AUA 93-21)*

60. Which artery is the main blood supply to the erectile tissue of the penis?
A. Dorsal artery **B.** Epigastric artery
C. Urethral artery **D.** Deep cavernosal artery
E. Obturator artery *(AUA 93-21)*

61. Colour Doppler sonography of the testis is helpful in differentiating testicular torsion from:
A. Tumour **B.** Epididymo-orchitis
C. Fracture of the testis **D.** Cysts
E. Hydrocele *(AUA 93-21)*

62. Rectus sheath haematoma formation:
A. Always must be managed with formal laparotomy
B. Is most often caused by damage to the inferior epigastric vessels
C. Is the most frequent complication of laparoscopy
D. Can be treated by increasing the intra-abdominal pressure
E. Is never painful *(AUA 93-32)*

63. To avoid bleeding from the rectus sheath during trocar insertion:
A. Use the smallest trocar possible
B. Use the Hasson technique for all trocars
C. Stay at least 6 to 8 cm away from the midline for secondary trocars
D. Use the finger as a brake on the trocar sheath
E. Check all trocar sites with a needle before insertion *(AUA 93-32)*

64. All of the following are absolute contraindications to laparoscopy *except:*
A. Haemoperitoneum
B. Intestinal obstruction or distension
C. History of appendicitis
D. Generalised peritonitis
E. Abdominal wall infection *(AUA 93-31)*

58 B 59 A 60 D 61 B 62 B 63 C 64 C

65. The change in frequency of sound as it is reflected from a moving object is called the:
A. Pulsed effect **B.** Doppler shift principle
C. Echo effect **D.** Train effect
E. Inverse square law *(AUA 93-21)*

66. Colour Doppler can colour code which of the following parameters of flowing blood?
A. Haematocrit and haemoglobin
B. Density and viscosity
C. Direction and velocity
D. Direction and volume
E. Velocity and viscosity *(AUA 93-21)*

67. Which of the following is not an indication for duplex sonography of transplanted kidney:
A. To rule out hydronephrosis
B. To rule out perinephric fluid collection
C. Help guide renal biopsies
D. To determine vascular resistance
E. To evaluate renal function *(AUA 93-21)*

68. Resistive index measurement in arcuate arteries of kidney is an estimation of:
A. Vascular resistance **B.** Function
C. Size **D.** Glomerular filtration
E. Parenchymal viability *(AUA 93-21)*

69. Urine specific gravity:
A. Is calculated by comparing weights of equal volumes of urine and distilled water
B. Measurement may now be done only in office labs certified for moderate complexity testing
C. Increases in patients with collagen disease
D. Decreases as a result of lipid nephrosis
E. Usually less than that of distilled water *(AUA 93-30)*

70. The gold standard method for bacterial culture of urine is the:
A. Streak plate technique
B. Tube culture technique
C. Pad culture
D. Dipslide technique
E. Pour plate technique *(AUA 93-30)*

71. The recommended insufflation gas for laparoscopy is:
A. Room air **B.** NO_2
C. O_2 **D.** CO_2
E. Mixture of NO_2 and CO_2 *(AUA 93-31)*

65 B 66 C 67 D 68 A 69 A 70 E 71 D

72. The Hasson technique:
- **A.** Is indicated only for pelvic lymphadenectomy
- **B.** Is useful in patients who have had multiple prior abdominal procedures
- **C.** Is not associated with any complication
- **D.** Is useful in patients with cardiac compromise
- **E.** Can be used to manage a bowel perforation *(AUA 93-31)*

73. Bladder injury during laparoscopy is:
- **A.** Prevented by staying lateral to the medial umbilical ligament
- **B.** Always associated with urethral injury
- **C.** Always managed by formal laparotomy and repair
- **D.** Related to the 'triangle of doom'
- **E.** Prevented by staying medial to the medial umbilical ligament *(AUA 93-31)*

74. Pneumoscrotum during laparoscopic pelvic lymphadenectomy:
- **A.** Is commonly encountered and related to faulty needle placement
- **B.** Is always associated with pneumothorax and pneumomediastinum
- **C.** Should result in immediate termination of the procedure
- **D.** Is usually self-limited and can be reduced by manual compression of the scrotum before the last trochar is removed
- **E.** Is generally treated by aspiration and wrapping with elastic bandages *(AUA 93-31)*

75. Hyaline casts:
- **A.** Like granular casts, signify significant disease
- **B.** Are composed of Tamm-Horsfall protein
- **C.** Result from degeneration of granular casts
- **D.** Indicate the presence of the nephrotic syndrome
- **E.** Occurs in patients with periarteritis nodosa *(AUA 93-30)*

76. Electrocautery injury to the bowel during laparoscopy:
- **A.** Is associated with significant bleeding
- **B.** Has not been described
- **C.** Can be prevented by using monopolar cautery
- **D.** Can be prevented by bipolar cautery
- **E.** May not present until the postoperative period when the bowel wall perforates *(AUA 93-32)*

77. Intraoperative hypothermia during laparoscopy:
- **A.** Is primarily due to carbon dioxide gas used for insufflation
- **B.** Is not a recognised complication of laparoscopy

72 B 73 A 74 D 75 B 76 E 77 A

C. Is prevented by heating the laparoscope and instruments prior to insertion into the abdomen
D. Is usually caused by failure to use heated irrigation solutions
E. Can be corrected by increasing minute ventilation with heated oxygen *(AUA 93-32)*

78. Postlaparoscopy shoulder pain:
A. Is preventable by carefully positioning the trocars
B. Usually signify significant postoperative bleeding either into the retroperitoneum or into the abdomen
C. Is usually severe and requires narcotics for control
D. Is only associated with the use of NO_2
E. Is often associated with failure to evacuate all of the CO_2 from the abdomen *(AUA 93-32)*

79. A mill-wheel type of murmur during laparoscopy suggests:
A. Tension pneumothorax
B. Intra-abdominal bleeding
C. Gas embolus
D. Is a common finding during interventional laparoscopy
E. Pre-existing valvular disease *(AUA 93-32)*

80. The initial treatment of suspected gas emboli during laparoscopy is:
A. Immediate release of pneumoperitoneum and placement of the patient. In the left lateral decubitus position with head down
B. Switching to NO_2, insufflation gas
C. Increase the minute ventilation and ventilation pressures to attempt to counteract the embolus
D. Insertion of additional working ports
E. Increase the pneumoperitoneum pressure to greater than 20 mmHg *(AUA 93-32)*

81. Sudden cardiovascular collapse during laparoscopy can be associated with all of the following *except:*
A. Myocardial infarction
B. Subcutaneous emphysema
C. Pneumothorax
D. Vasovagal reflex
E. Gas embolus *(AUA 93-32)*

82. When monitoring CVP during laparoscopy:
A. The actual CVP may not accurately reflect the cardiovascular status due to the hypercarbia present

78 E 79 C 80 A 81 B 82 B

B. To actual CVP may not accurately reflect the cardiovascular status due to the effect of transmural and pleural pressure
C. CVP monitoring is contraindicated during laparoscopy
D. CVP should only be used to aspirate the right atrium during the treatment of gas embolism
E. Nitrous oxide must not be used *(AUA 93-32)*

83. Screening programs for the early detection of prostate cancer should include:
A. Serum PSA measurement
B. Transrectal ultrasound and DRE
C. Serum PSA measurement and DRE
D. Serum PSA measurement and transrectal ultrasound
E. Serum PSA measurement, DRE, and transrectal ultrasound *(AUA 95-1)*

84. PSA density is defined as:
A. Serum PSA × prostate volume
B. Serum PSA/prostate volume
C. Prostate volume/serum PSA
D. Prostate volume × serum PSA/Gleason score
E. Serum PSA—prostate volume × 40 *(AUA 95-1)*

85. What is the simplest method to assess skeletal muscle protein?
A. Midarm muscle circumference
B. Triceps skin fold
C. Serum albumin
D. Total lymphocyte count
E. Urinary urea nitrogen *(AUA 95-3)*

86. The extent of hypermetabolism is best measured by:
A. Serum albumin
B. Heart rate
C. Urinary urea nitrogen
D. Serum transferrin
E. Temperature *(AUA 95-3)*

87. Measurement of cellular immunity by skin test antigens reflects to the status of:
A. Fat stores
B. Visceral protein stores
C. Skeletal protein stores
D. Bone marrow stores
E. The extent of hypermetabolism *(AUA 95-3)*

88. The initial laboratory test which provides the most important diagnostic clue in gouty diathesis is the:

83 C 84 B 85 A 86 C 87 B 88 C

A. 24-hour urinary calcium
B. Serum uric acid level
C. Urine pH
D. Urine uric acid level
E. Urinary crystals *(AUA 95-5)*

89. MRI can occasionally miss the diagnosis of which occult dysraphism?
A. Filum terminale syndrome
B. Lipomyelomeningocele
C. Dorsal dermal sinus
D. Diastematomyelia
E. Neuroenteric cyst *(AUA 95-10)*

90. The imaging procedure of choice for diagnosing acute renal abscess is:
A. IVU with nephrotomography
B. CT
C. Renal ultrasonography
D. Retrograde pyelography
E. Gallium/indium radioisotopic scan *(AUA 95-26)*

91. Cloudy urine is most commonly due to:
A. Chyluria **B.** Lipiduria
C. Phosphaturia **D.** Pyuria *(CU 7 145)*

92. The method of choice for detecting specific proteins (such as Bence Jones) in urine:
A. Dipstick impregnated with tetrabromophenol blue dye
B. Immunoassay
C. Protein electrophoresis
D. 3 per cent sulfosalicylic acid test *(CU 7 151)*

93. Amount of water-soluble contrast material necessary to opacify and distend the anterior male urethra usually range from:
A. 6-10 ml **B.** 10-20 ml
C. 20-30 ml **D.** 15-40 ml *(CU 7 193)*

94. Minimal or no hydronephrosis may be seen in sonography up to _____ hours after the patient is symptomatic for acute urinary obstruction:
A. 24 **B.** 12
C. 48 **D.** 36 *(CU 7 201)*

95. Most practical and accurate noninvasive modality in the diagnosis of varicocele and follow-up after treatment at present is:

89 D 90 B 91 C 92 B 93 A 94 C 95 A

A. Sonography
B. Color Doppler imaging
C. Radionuclide flow studies
D. Venography (percutaneous with microneedles) *(CU 7 213)*

96. Missed torsion of testis that is several days old present typically as a photopenic central area surrounded by a rim of increased radioactivity, that is:
A. Golf hole sign **B.** Doughnut sign
C. Stadium sign **D.** Moon sign *(CU 7 229)*

97. A major contribution of _____ in adrenal adenomas is its ability to differentiate benign from metastases:
A. Spiral CT **B.** Sonography
C. Color Doppler **D.** MRI *(CU 235)*

98. In comparison with living donor renal arteriography, three dimensional CT angiography:
A. Offers the advantages of being less invasive, more rapid to perform and less expensive, with less radiation exposure
B. Suffers from the disadvantages of being invasive, time consuming, more expensive, and with more radiation exposure
C. Offers the advantages of being less invasive, more rapid to perform with disadvantages of being more expensive and more radiation exposure
D. Offers all of the above mentioned advantages except that there is more of radiation exposure *(CU 7 511)*

99. The p-nitro-a-acetylamino-B hydroxypropriophenole (NAP) test is used to differentiate:
A. *S. haematobium* from *S. japonicum*
B. *S. japonicum* from *S. mansoni*
C. *Cryptococcus* from *aspergillus*
D. *M. tuberculosis* from nontuberculous mycobacteria
(CU 7 820)

100. Which is the most sensitive imaging method for detection of ureterovesical uretero-reflux?
A. Video micturating cystourethrography
B. Radionuclide cystography
C. Color Doppler
D. Spiral CT *(CU 7 932)*

101. It has been reported to differentiate upper from lower motor neuron lesions of the lower urinary tract:

96 B 97 D 98 A 99 D 100 B 101 D

A. Bethanechol stimulation test
B. Uroflowmetry
C. Cystometrogram
D. The ice water test *(CU 7 936)*

102. The fetal kidney can be routinely detected by ultrasound by ____ weeks of gestation:
A. 27th **B.** 9th
C. 14-15th **D.** 20-24th *(CU 7 1603)*

103. In several studies correlating postnatal findings with prenatal hydronephrosis, a renal pelvis of greater than ____ mm correlated best with an abnormal postnatal finding:
A. 5 **B.** 10
C. 15 **D.** 20 *(CU 7 1605)*

104. In a male fetus, ultrasound findings of bilateral hydroureteronephrosis, a thick-walled slightly dilated bladder, a dilated posterior urethra, a renal parenchymal change (such as hyperechogenicity or cysts), and varying degree of oligohydramnios gives a diagnosis of _____ with reasonable confidence:
A. Posterior urethral valve
B. Anterior urethral valve
C. Prune-belly syndrome
D. Bilateral ureterocele with duplication anomalies
(CU 7 1605)

105. Presently which of the following modality is most commonly employed to evaluate the presence of seminal vesicles?
A. Seminal fructose determination
B. TRUS
C. MRI
D. Spiral CT *(CU 7 1297)*

106. The most direct way to demonstrate pituitary hypersecretion of ACTH is:
A. 24-hour urinary cortisol measurement
B. Metapyron stimulation test
C. To measure its level in petrosal venous sinus and compare the level to the peripheral level
D. Its determination in the adrenal venous blood *(CU 7 2928)*

107. TRUS findings consistent with obstruction of seminal vesicle include:

102 C 103 B 104 A 105 B 106 C 107 E

A. Anterior posterior diametr > 15 mm
B. Length > 35 mm
C. Large anechoic area containing sperms on aspiration
D. A and C
E. D and B *(CU9-1111)*

108. At this time, ___ is the most accurate radiologic study for the diagnosis of ureteral calculi with overall accuracy of 97%. (CU9-1211)
A. CT **B.** USG
C. MRI **D.** Plain KUB X-ray

109. CT directly demonstrates calculi classically considered radiolucent when evaluated by plain radiography with the exception of ___.
A. Uric acid
B. Xanthine
C. Dihydroxyadenine
D. Many drug induced calculi
E. Calculi composed of protease inhibitors *(CU9-1211)*

110. On excretory urography of patients with ____, the bladder characteristically assumes a pear or gourd shape, extrinsically compressed and elongated, and the bladder base is frequently elevated.
A. Vesical TB
B. Bilharziasis
C. Pelvic lipomatosis
D. Retroperitoneal fibrosis
E. Interstitial cystitis. *(CU9-1218)*

111. 'Sickle shaped' ureteral deformity based on IVU or retrograde pyelographic finding is classified as type ___ circumcaval ureter.
A. I **B.** II
C. IIc **D.** IIIa *(CU9-1225)*

112. Renography can provide quantitative measurement of renal function, and generally kidneys with less than ___% differential function are nonsalvageable in adult.
A. 15 **B.** 20
C. 10 **D.** 25 *(CU9-1232)*

113. The most direct and reliable index of cortisol secretion is:
A. Midnight plasma cortisol measurement
B. Dexamethasone suppression test

108 A 109 E 110 C 111 B 112 A 113 C

C. 24-hour urinary cortisol determination
D. Late night salivary cortisol concentration measurement
(CU9-1833)

114. A characteristically bright "____" image on T2 weighted MRI study identifies pheochromocytomas.
A. Light bulb **B.** Halo
C. Triangular **D.** Sunglass *(CU9-1863)*

115. Intraoperative ultrasonography has been used to: 1. Facilitate identification of the adrenal gland 2. Help identify the adrenal vein 3. Delineate tumor within the adrenal gland to facilitate adrenal sparing surgery.
A. Only 2 and 3 true **B.** Only 1 is true
C. All true **D.** Only 3 is true *(CU9-1884)*

116. Success in identifying lymphadenopathy has been greater with positron emission tomography than that in staging primary bladder lesions because the reagent used ,_____, is excreted in urine making local tumor diagnosis or assessment almost imposible.
A. Fluorodeoxyribose **B.** Fluorodeoxysucrose
C. Fluorodeoxymannose **D.** Fluorodeoxyglucose
(CU9-2440, 2469)

117. Using a different isotope not excreted in urine, ,_____, as the PET tracer, Triber and colleagues (2005) reported similar sensitivity to CT in detecting primary invasive bladder tumors.
A. 9C-choline **B.** 10C-choline
C. 11C-choline **D.** 13C-choline *(CUP-2440)*

118. Most noncalcified lesions that are ____ cm or larger, are metastases or primary pulmonary neoplasms, and are detectable by routine chest X-rays.
A. One **B.** Two
C. Three **D.** Four *(CU9-2441)*

119. Match the following components of renal function and its determination methods.

1. GFR	a. Urine protein concentration
2. Ability of the tubule to acidify	b. Inulin clearance
3. Concentrating ability	c. Water deprivation
4. Glomerular permeability	d. Ammonium chloride loading

114 A 115 C 116 D 117 C 118 A 119 B

A. 1-a : 2-b : 3-c : 4-d **B.** 1-b : 2-d : 3-c : 4-a
C. 1-d : 2-c : 3-a : 4-b **D.** 1-c : 2-a : 3-b : 4-c *(CU9-2564)*

120. The lack of distinct hypoechoic focus does not preclude proceeding with biopsy because 39% of all cancers are isoechoic and up to ___% tumors may be hyperechoic on conventional gray-scale TRUS.
A. 5 **B.** 4
C. 3 **D.** 1 *(CU9-2886)*

121. The TZ BPH nodules are typically ____ on TRUS.
A. Hyperechoic B. Isoechoic
C. Hypoechoic *(CU9-2887)*

122. Bone scintigraphy is the most sensitive modality for detection of skeletal metastases from cancer prostate. Skeletal radiography require more than ___ of the bone density to be replaced with tumor before they can identify distant spread.
A. 20% **B.** 30%
C. 40% **D.** 50% *(CU9-2930)*

123. Physical half-life of radionuclide 89Sr is ___ days.
A. 14.3 **B.** 50.6
C. 90.6 **D.** 46.3 *(CU9-3029)*

124. When used as a first line test in suspected occult spinal dysraphisim, optimal timing of the spinal ___ is before 6 months of age.
A. MRI **B.** CT
C. USG **D.** Plain X-ray spine *(CU9-3213)*

125. _____ is the most accurate means of determining whether a testis, intra-abdominal and has been shown to be a safe procedure in experienced hands.
A. Pneumoperitoneography
B. Diagnostic laparoscopy
C. MRI
D. USG
E. Testicular angiography and venography
F. Herniography *(CU9-3782)*

126. The following two tests are 100% specific for bladder transitional cell carcinoma.
A. NMP22 and BTA stat
B. Lewis X and Flow cytometry
C. FDP and QUANTICYT
D. FISH and BLCA-4 *(SU16-57t)*

120 D 121 C 122 D 123 B 124 C 125 B 126 D

127. PSA has become most useful as a marker of effective treatment (falls to zero following removal of organ-confined prostate cancer) and early recurrence that antedates other clinical evidence of tumor by _____ months or more.

A. 2 **B.** 4
C. 6 **D.** 8 *(SU16-60)*

128. Biologically important nuclei other than hydrogen that is/are Magnetic resonance sensitive, but these occur in low physiologic concentration than hydrogen.

A. Phosphorus **B.** Sodium
C. Potassium **D.** Selenium
E. Zinc **F.** A, B and C *(SU16-95)*

129. Chemical shift imaging is a modification of _____ that can detect microscopic amount of fat within a lesion.

A. MRI technique
B. CT technique
C. USG technique
D. Angiography technique *(SU16-101)*

127 C 128 F 129 A

5 Urinary Obstruction

1. **Normal kidney produces lymph, the volume of which is similar to the volume of urine output. Lymph flow is increased by:**
   A. Ureteral obstruction **B.** Water diuresis
   C. DDAVP **D.** None of A, B, C *(CU 501)*

2. **With ureteral obstruction, initially there is ____ backflow; with higher renal pelvis pressure, egress of urine into both the ___ system occurs:**
   A. Pyelocanalicular and pyelosinus; lymphatic and venous
   B. Lymphatic and venous; pyelocanalicular and pyelosinus
   C. Pyelocanalicular and lymphatic; pyelosinus and venous
   D. Lymphatic and pyelosinus; venous and pyelocanalicular
   (CU 502)

3. **In hydronephrosis, fluid exits from the renal pelvis by:**
   A. Extravasation into the perirenal spaces
   B. Pyelovenous backflow
   C. Pyelolymphatic backflow
   D. B and C
   E. All of A, B, C *(CU 503)*

4. **In chronic hydronephrosis, most of the urine exits into the renal:**
   A. Lymphatic system
   B. Arterial system
   C. Venous system
   D. None *(CU 503)*

5. **Compensatory renal growth includes:**
   A. Both hypertrophy and hyperplasia
   B. Only hypertrophy
   C. Only hyperplasia *(CU 503)*

6. **With loss of renal tissue, the compensatory growth of the remaining kidney tissue is mostly hypertrophic. In the repair after acute tubular necrosis, ____ is believed to be dominant:**

1 A 2 B 3 A 4 E 5 C 6 A

A. Hyperplasia
B. Hypertrophy
C. Both hypertrophy and hyperplasia *(CU 503)*

7. **What occurs after ingestion of a large protein meal:**
A. Increase in renal blood flow
B. Increase in GFR
C. Decrease in renal blood flow and increase in GFR
D. Hyperperfusion and decreased GFR
E. Both A and B *(CU 504)*

8. **Obligatory renal growth (growth associated with the growth of the rest of the kidney) occurs at a predetermined standard rate regardless of the host's age or size. This statement is:**
A. True **B.** False *(CU 505)*

9. **Impairment of urinary concentrating ability is the most consistent and probably the ___ derangement of physiologic function that occurs with obstructive uropathy:**
A. Last **B.** First
C. Only **D.** A and C *(CU 506)*

10. **Match the following:**

A. It is used to assess functioning of renal cortical tissue	1. ^{131}I-hippuran
B. It is used to assess the GFR and cortical renal blood flow	2. ^{99m}Tc-DMSA
C. This measures renal blood flow and correlates with the GFR	3. ^{99m}Tc-DTPA

(CU 506)

11. **Studies in humans demonstrated that partial obstruction impairs all measured renal function *except:***
A. Urinary concentration
B. Urinary dilution
C. Renal blood flow
D. Glomerular filtration rate *(CU 508)*

12. **Normal renal pelvic pressure measured through a ureteral catheter is 11 mm Hg, and it is _____ mm Hg with percutaneous puncture:**
A. 4.5 **B.** 5.5
C. 6.5 **D.** 7.5 *(CU 509)*

7 E 8 A 9 B 10 A:2, B:3, C:1 11 B 12 C

13. Chronic complete unilateral ureteral obstruction causes impairment of all renal functions *except:*
A. Urinary concentration
B. Urinary dilution
C. Glomerular filtration rate
D. Renal blood flow *(CU 515)*

14. The most significant difference between bilateral and unilateral ureteral obstruction observed in experimental animals is that natriuresis and diuresis occur after release of ___, but not ____ obstruction:
A. Bilateral: unilateral
B. Unilateral: bilateral *(CU 519)*

15. Urinary ascites (spontaneous intraperitoneal extravasation of urine) is rare but has been seen in children (most reported patients have been infants with obstruction from posterior urethral valve). Because of equilibration of urine across the peritoneal membrane, the ratio of ascitic fluid to plasma creatinine may be as low as 2:1. Normally the ratio of urine to plasma creatinine is:
A. 30:1 to 100:1
B. 10:1 to 20:1
C. 1:50 to 1:70
D. 50:1 to 70:1 *(CU 524-525)*

16. In most instances of extrinsic obstruction of the ureter where the procedure is being performed electively and the patient has a reasonable life expectancy, which of the following would be preferred:
A. Balloon dilation of the ureter
B. Percutaneous drainage
C. Placement of an indwelling ureteral catheter
D. Indwelling stent *(CU 535)*

17. An abdominal aortic aneurysm may affect the ureter in as many as ___ per cent of cases:
A. 10 **B.** 20
C. 5 **D.** 15 *(CU 536)*

18. There are a number of vascular anomalies that rarely may cause ureteral obstruction. Although obstruction may occur at any level, it is more frequent in the:
A. Lower third
B. Mid third
C. Upper third *(CU 537)*

13 B 14 A 15 A 16 C 17 A 18 A

19. Which is the most common cause of extrinsic ureteral obstruction:
A. Retroperitoneal fibrosis
B. Retroperitoneal fibrosis secondary to surgical procedure
C. Vascular anomalies
D. Huge aneurysm of the abdominal aorta *(CU 538)*

20. As the ovarian veins course over the iliac vessels, they lie only 1/2 inch anterior to the ureter in its midportion. The obstruction due to ovarian vein syndrome usually involves the:
A. Right ureter
B. Left ureter
C. Right and left ureters equally *(CU 539)*

21. The retrocaval (circumcaval) ureter is a congenital abnormality in which the___ ureter passes behind the vena cava, leading to varying degrees of ureteral obstruction:
A. Left **B.** Right
C. Whole *(CU 540)*

22. Two types of retrocaval ureters have been described. Type I ("low loop") where the dilated proximal ureter assumes a reverse J; type II ("high loop") goes behind the ureter at the level of or just above the uretero-pelvic junction. Which is the most common type:
A. Type I **B.** Type II *(CU 541)*

23. In patients of retrocaval ureter without symptoms and with minimal or no calicectasis:
A. Harril procedure should be done
B. No therapy other than observation is indicated
C. Transection with reanastomosis of the inferior vena cava
D. Foley Y-plasty should be done *(CU 541)*

24. The most common benign pelvic masses that result in extramural ureteral obstruction are:
A. Ovarian cysts
B. Ovarian fibromas
C. Uterine fibroids
D. Hydrometrocolpos *(CU 542)*

25. Uterine fibroids resulting in extramural ureteral obstruction most commonly affect the:
A. Right side
B. Left side
C. Left side in the lower third
D. Left side in the midportion *(CU 543)*

19 B 20 A 21 B 22 A 23 B 24 C 25 A

26. The incidence of hydroureteronephrosis associated with uterine prolapse is in the vicinity of:
A. 10 per cent **B.** 15 per cent
C. 2 per cent **D.** 5 per cent *(CU 546)*

27. A variable incidence of involvement of the ureter and the urinary bladder of up to 24 per cent in women afflicted with endometriosis has been reported; which of the following is a true statement:
A. Involvement of the ureter is much less frequent than that of the bladder
B. When the ureter is involved, the process is usually confined to the pelvic ureter
C. Involvement of the bladder is more frequent than that of the ureter
D. All of the above
E. Involvement of the bladder is less frequent *(CU 544)*

28. Older patients are more frequently affected by hydronephrosis associated with uterine prolapse, and ___, obstruction is more common:
A. Bilateral
B. Right sided
C. Left sided *(CU 546)*

29. The incidence of intraoperative ureteral injury is much higher following:
A. Radical cystectomy
B. Radical hysterectomy
C. Renal transplantation
D. Pelvic lymph node dissection *(CU 546)*

30. The ureter lies dorsal to the ovary, lateral to the infundibulopelvic ligament, and medial to the ovarian vessels. It is commonly damaged:
A. In the ovarian fossa, during excision of a large tumour or cyst
B. In the vesicovaginal space, during the process of reperitonealisation
C. In the infundibulopelvic ligament, when this is taken during hysterectomy
D. Where the ureter crosses dorsal to the uterine artery, as the artery is ligated and divided
E. All of the A, B, C, and D
F. Only A, C, and D *(CU 547)*

26 D 27 D 28 A 29 B 30 E

31. Urologic complications are found in approximately 20 per cent of patients with diverticulitis; the most frequent is ____. The left ureter is involved more often than the right:

A. Colovesical fistula
B. Coloureteral fistula
C. Rectourethral fistula
D. Complete ureteral obstruction *(CU 549)*

32. There is characteristic medial deviation of the ureter, at the middle third, beginning at the level of the third and fourth lumbar vertebrae on IVU. The most probable diagnosis would be:

A. Retroperitoneal neoplasm
B. Retroperitoneal fibrosis
C. Bladder diverticulum
D. Metastatic tumour *(CU 552)*

33. Which is considered as a characteristic feature of retroperitoneal fibrosis:

A. The ultrasonic appearance
B. If the disease process has extended through the ureteral wall, a saw-tooth pattern is seen in the lumen on retrograde studies
C. In most instances the area of narrowing of the ureter readily permits the passage of a 5 or 6 Fr. catheter
D. The ureteral obstruction is usually bilateral, but it may be asymmetrical and unilateral *(CU 553)*

34. In cases of retroperitoneal fibrosis, after ureterolysis the ureters are managed in which way:

A. They may be transplanted to an intraperitoneal position
B. They may be wrapped with omental fat
C. They may be transposed laterally, interposing retroperitoneal fat between the ureters and the fibrosis
D. The procedure of ureterolysis and one of the above should be performed bilaterally, even in the presence of unilateral disease
E. All of the above
F. Only B and D *(CU 554)*

35. The most common cause of death in patients with carcinoma of cervix is:

A. Uraemia **B.** Haemorrhage
C. Radiotherapy *(CU 555)*

31 A 32 B 33 C 34 E 35 A

36. The ureters are relatively resistant to the effects of radiation; in majority of patients, the obstruction resolves within 3 to 4 months; the most common point of obstruction is where the ureter and the uterine arteries cross; radiation induced stricture is unlikely in a normal ureter administered up to:

A. 400 rads **B.** 500 rads
C. 600 rads **D.** 700 rads *(CU 556)*

37. Statement A: a haematoma of the rectus abdominis muscle may cause ureteral obstruction and vesical compression: Statement B: the haematoma may spread retroperitoneally

A. A is true **B.** B is true
C. Both are false **D.** Both are true

38. All are causes of 'pear-shaped' bladder *except:*

A. Perivesical haematoma, urinoma or abscess
B. Retroperitoneal fibrosis
C. Pelvic lipomatosis
D. Iliopsoas hypertrophy
E. Pelvic fibrosis *(CU 565)*

39. Chronic ureteral obstruction can occur 6 to 12 months or even 10 years or more after radiotherapy, but it most often becomes evident in _____ years after completion:

A. 5-10 **B.** 0-1
C. 6-7 **D.** 1-3 *(CU 7 410)*

40. In schistosomal obstructive uropathy:

A. Hydronephrosis usually precedes hydroureter
B. Hydroureter usually precedes hydronephrosis
C. Hydronephrosis usually represents the final stage in succession of sequelae
D. B and C are true *(CU 7 755)*

41. The term urethral stenosis refers to:

A. Anterior urethral disease, or a scarring process involving spngy erectile tissue of the corpus spongiosum (spongiofibrosis)
B. Posterior urethral stricture
C. Both A and B
D. Stenosis at any part of urethra *(CU9-1054)*

42. Distraction injuries for all intents are unique to the:

A. Bulbous urethra **B.** Membranous urethra
C. Penile urethra **D.** Prostatic urethra *(CU9-1054)*

36 C 37 D 38 B 39 D 40 D 41 A 42 B

43. Renal recovery after relief of obstruction is affected by: 1. Duration of obstruction 2. Degree of obstruction 3. Patient's age 4. Baseline renal function

A. All of 1, 2, 3, 4 **B.** Only 1, 2, 3
C. Only 1, 2 **D.** Only 1, 2, 4

44. In flowmeters, ther is a delay between initiation of voiding and the urinary stream reaching the flowmeter. This should be from 1 to 1.4 seconds in females and ___ seconds in males.

A. 1.1 to 1.6 **B.** 1.6 to 1.9
C. 2.0 to 3.8 **D.** 4.0 to 5.6 *(CU9-1989)*

45. Most consider Q max greater than 15 to 20 ml/sec as normal and less than 10 ml/sec as abnormal in men as normal uroflow parameters. These numbers decline with age by ___ ml/sec per 5 years. There is a decline in peak flow with age resulting in a maximum flow of 5.5 ml/sec at 80 years.

A. 1.0 to 2 **B.** 3 to 4
C. 0.5 to 1.0 **D.** 2.5 to 3.0 *(CU9-1991)*

46. Nomogram by ___ is developed for the bladder outlet obstructed women.

A. Balivas and Groutz **B.** Schafer
C. Abrams-Griffiths **D.** ICS *(CU9-1998)*

47. If indwelling catheter obstruction occurs in basence of urea-splitting organisms in urine, consider urine acidification if the urine output is normal (at low output, acidification may increase blockage due to uric acid crystals.

A. True **B.** False *(CU9-2320)*

48. Acquired bladder diverticula in men usually occur after the age of ___ years, which corresponds to the age at development of prostatic enlargement.

A. 40 **B.** 50
C. 60 **D.** 55 *(CU9-2361)*

49. The male sling for post prostatectomy incontinence (PPI) is not a new idea. One of the first prosthetic device in the modern era to increase urethral resis-tance was described by ___ in 1961.

A. Clemens B. Berry
C. Kishev D. Kaufman *(CU9-2392)*

50. Success with artificial urinary sphincter for the treatment of post prostatectomy incontinence is generally excellent, with continence rates between ___, and patient satisfaction rates of 85% to 95% despite revisions.

43 A 44 A 45 A 46 A 47 A 48 C 49 B 50 A

A. 75 and 90 **B.** 65 and 80
C. 55 and 75 **D.** 45 and 60 *(CU9-2397)*

51. Not true about management of posterior urethral values.
A. Today, the goal is not to remove the posterior urethral values but to incise them so that they are not suspected across the urethra, obstructing the urine flow.
B. Well placed incisions can disrupt the integrity and allow the values to lie freely along the walls of the urethra when child voids.
C. The value remnants resolve after incisions and there is often no evidence of them on later cystoscopic examination
D. Procedure of choice is to cut values with Whitaker book either blindy or fluoroscope control. *(3591)*

52. The terms valve bladder syndrome and full value bladder were coined by _____ to describe a chronic condition in patients with values in which, despite successful value edition, intrinsic bladder dysfunction leads to deterioration of the upper urinary tracts and incontinence.
A. Mitchell **B.** Glassberg
C. Bellinger **D.** Koff and associates *(CU9-3596)*

53. This is not a true statement:
A. The long term outcomes of anterior urethral values are similar to those of the posterior urethra.
B. Congenital urethral structures are rare anomalies that produce the same pathologic and clinical problems as posterior urethral valves.
C. Though duplication of urethra is a rare anomaly, most occur in the horizontal plane.
D. Values are the only urologic anomaly considered for antenatal intervention. *(CU9-3601)*

51 D 52 A 53 C

6 Neurogenic Bladder and Incontinence

1. **A visible contraction of the external anal sphincter after pinprick of the mucocutaneous junction constitutes the anal reflex, and its activity usually parallels that of the bulbocavernosus reflex. It is:**
   A. True **B.** False *(CU 578)*

2. **For the purposes of discussion, the normal adult cystometrogram is divided into:**
   A. 2 phases **B.** 3 phases
   C. 4 phases **D.** 5 phases *(CU 586)*

3. **Known factors that can give a falsely positive bethanachol supersensitivity test include all *except:***
   A. An interruption in the neural pathways to and from the bladder
   B. Urinary tract infection
   C. Detrusor hypertrophy
   D. Azotaemia
   E. Emotional stress
   (CU 588)

4. **Which is not a classification of neuromuscular voiding dysfunction?**
   A. International continence society classification
   B. Cannon's **C.** Bors-Comarr
   D. Hald-Bradley **E.** Bradley
   F. Lapides **G.** Urodynamic *(CU 595)*

5. **All of the following conditions are generally associated with detrusor hyperreflexia as lower urinary tract dysfunction *except:***
   A. Poliomyelitis
   B. Cerebrovascular accident
   C. Brain tumour
   D. Cerebellar ataxia
   E. Parkinson's disease
   F. Shy-Drager syndrome *(CU 601-10)*

1 A 2 C 3 A 4 B 5 A

6. **All of the following statements regarding spinal shock are true, *except:***
   A. Following significant spinal cord injury, urinary retention is the rule, and catheterisation is necessary to circumvent this problem
   B. Although intermittent catheterisation is an excellent method of management during this period, suprapubic fine-bore cystotomy seems to be a suitable alternative
   C. Patients with fine-bore suprapubic cystotomy seem to recover bladder function earlier than those with intermittent catheterisation
   D. The return of reflex bladder activity is generally manifested by involuntary voiding between intermittent catheterisations
   E. Overall, however, women seem to suffer less morbidity and mortality from the urinary tract in SCI than do males of similar age and neurological lesions *(CU 605-6-9)*

7. **This drug is a moderately potent anticholinergic agent with a strong independent musculotropic relaxant activity and local anaesthetic activity as well:**
   A. Atropine **B.** Propantheline
   C. Oxybutynin **D.** Methantheline *(CU 616)*

8. **All have anticholinergic and musculotropic relaxant properties *except:***
   A. Terodiline **B.** Flavoxate
   C. Dicyclomine **D.** Oxybutynin *(CU 616)*

9. **Who deserves enormous credit for first applying the concept of self-intermittent catheterisation to patients with voiding dysfunction?**
   A. Lapides
   B. Scott and co-workers
   C. Politano and co-workers
   D. Nelaton *(CU 626)*

10. **Causes of transient incontinence include: 1. delirium/confusional states, 2. symptomatic urinary infection, 3. atrophic urethritis/ vaginitis, 4. pharmaceuticals, 5. depression, 6. excessive urine output (congestive heart failure, hyperglycaemia), 7. restricted mobility, 8. stool impaction, 9. bladder carcinoma, 10. urethral stricture:**
    A. All of 1 to 10
    B. All except 9 and 10
    C. All except 3 and 7
    D. All except 6, 9 and 10

6 C 7 C 8 A 9 A 10 B

11. Detrusor overactivity is one of the established causes of urinary incontinence; this has been found to exist in two physiologic subsets—one in which contractile function is preserved and one in which it is impaired. The later condition is termed as DHIC (Detrusor hyperactivity with impaired contractility). Which is the most common cause in frail elderly persons?

A. Detrusor hyperactivity with perserved contractility
B. DHIC *(CU 646)*

12. 'Christmas tree' bladder is due to:

A. Detrusor overactivity
B. Detrusor underactivity
C. Outlet incompetence
D. Outlet obstruction *(CU 648)*

13. Which of the following is correct in relation to GSI (Genuine stress incontinence)?

A. The bladder neck and proximal urethra is poorly supported by musculofascial ligamentous structures
B. Only multiparous women are prone to it
C. Pubovaginal sling procedure is the method of choice for correction of this condition
D. A large proportion will resolve on its own
E. It is relatively uncommon in United States *(AUA 95-2)*

14. Grade II passive incontinence is when the:

A. Patient is continent with physical stress (walking, standing erect from a sitting position, sitting up in bed)
B. Patient loses urine with sudden increases in abdominal pressure but not at night
C. Patient experiences total incontinence unrelated to activity or position
D. Patient finds urine stains in his underwear following normal voiding
E. Patient needs to run to the bathroom to prevent inadvertent accidents *(AUA 95-2)*

15. For which of the following conditions was bovine collagen injection initially used?

A. Facial wrinkles **B.** Vesicoureteral reflux
C. GI reflux **D.** Urinary incontinence
E. Glottic insufficiency *(AUA 95-2)*

16. Which of the following statements regarding pubovaginal sling procedure is correct?

11 B 12 D 13 A 14 A 15 A 16 C

A. Most failures are due to laxity of tension in the sling
B. The procedure is most suitable for patients with GSI
C. Overall success rates reported are about 80 per cent
D. Detrusor flaccidity is one of the common compli-cations
E. The procedure is most useful in male patients *(AUA 95-2)*

17. The artificial urinary sphincter is most successfully used in patients with:
A. GSI
B. Postprostatectomy incontinence
C. Failed pubovaginal sling surgery
D. Poor pelvic irradiation intrinsic sphincter dysfunction
E. Valsalva leak points above 90 cm H_2O *(AUA 95-2)*

18. Characteristics of the ideal bioinjectable material are all of the following *except:*
A. Nonreactive **B.** Nonmigratory
C. Nonerosive **D.** Radio-opaque
E. Easily placed *(AUA 95-2)*

19. Which of the following statements regarding autologous fat injection is true?
A. About 20 per cent of the fat volume is lost at one year after implantation
B. Fat obtained by liposuction is preserved longer than graft fat
C. Lung embolisation with fat particles is common
D. By nine months almost all injected fat is replaced by connective tissue
E. Results in male patients with postprostatectomy incontinence are good *(AUA 95-2)*

20. In which patients is collagen injection most successful?
A. Women with type I stress incontinence
B. Women with type II stress incontinence
C. Men with postprostatectomy incontinence
D. Men with incontinence following radiation
E. Children with myelodysplasia *(AUA 95-2)*

21. Given the following options, choose the most effective drug therapy for chronic pelvic pain:
A. Codeine tabs alone
B. Amitriptyline and minipress
C. Septra and codeine
D. Mortin and valium
E. Valium and benadryl *(AUA 95-17)*

17 B 18 D 19 D 20 C 21 B

22. Not a pharmacologic agent for increasing bladder outlet resistance:
- **A.** Imipramine
- **B.** Ephedrine
- **C.** Baclofen
- **D.** Phenylpropanolamine hydrochloride *(CU 7 983)*

23. A patient loses urine with sudden increase in abdominal pressure but not supine. It is grade ____ incontinence:
- **A.** 0
- **B.** I
- **C.** II
- **D.** III
- **E.** IV *(CU 7 1115)*

24. No true about artificial genitourinary sphincter (AGUS) placement following radical prostatectomy/urethral reconstructive surgery:
- **A.** A minimum period of six months should be allowed between the time of radical prostatectomy and AUGS
- **B.** Unless contraindicated the patient should have a trial of anticholinergic and/or alpha-sympathomimetic medication along with pelvic floor exercises before AUGS
- **C.** Postprostatectomy incontinence can dramatically improve on its own in first six months following surgery
- **D.** Patients rendered incontinent after urethral reconstructive surgery are not candidates for an AGUS *(CU 7 1123)*

25. Capsaicin and its ultrapotent analog resiniferatoxin are ___ that stimulate and desensitize a specific population of sensory nerves (unmyelinated C fibers) to produce pain and release neuropeptides.
- **A.** Alkalloids
- **B.** Vescolloids
- **C.** Vanilloids
- **D.** Acilloids *(CU9-1958)*

26. The main difference between capsaicin and its ana-log resiniferatoxin (RTX) is that:
- **A.** Desensitization predominates over excitation in response to RTX
- **B.** RTX is more potent and is the active ingredient in euphorabium
- **C.** Desensitization predominates over excitation in response to capsaicin
- **D.** Both A and B true *(CU9-1959)*

27. Intrinsic sphincter-deficiency in females was originally describes as ___. type stress incontinence.

22 C 23 B 24 D 25 C 26 D 27 C

A. I **B.** IIa
C. III **D.** IIb *(CU9-1977)*

28. ____ 's "loop system" of classification of voiding dysfunction is primarily neurologic system based.
A. Bors-Comarr **B.** Lapides
C. Bradley **D.** Hald-Bradley *(CU9-1984)*

29. The combination of asymmetry of symptoms and signs, the presence of resting tremor, and a good response to levodopa best differentiates parkinson's disease from parkinson's produced by other causes. Wyndaele and colleagues (2005) endorse additional criteria for distinguishing lower urinary tract symptoms caused by multiple systemic atrophy from those caused by Parkinson's disease. The following all but one suggest multiple systemic atrophy.
A. Voiding dysfunction secondary to Parkinson's disease defies "routine" classification within any system.
B. Urinary symptoms precede or present with parkinsonism
C. Urinary incontinence
D. Significant postvoid residual
E. Initial erectile failure
F. Abnormal striated sphincter EMG *(CU9-2018)*

30. Spinal column (bone) segments are numbered by the vertebral level, and these have a different relationship to the spinal cord segmental level at different locations. The spinal cord terminates in the cauda equine at approximately the spinal column level ___.
A. L1 **B.** L2
C. L3 **D.** L4 *(CU9-2021)*

31. The Fowler syndrome refers to urinary retention in young women in the absence of overt neurology disease. A bladder capacity of ___ with no sensation of urgency is required for the diagnosis.
A. 600 ml **B.** 700 ml
C. 1000 ml **D.** 800 ml *(CU9-2040)*

32. Wernicke's encephalopathy is caused by deficiency of ___.
A. Thiamine **B.** B_6
C. B_{12} **D.** Lutein *(CU9-2042)*

33. There are involuntary detrusor contractions, but the patient is aware of them and can voluntarily contract the sphincter, prevent incontinence, and abort the detrusor contraction. This is type ___ overactive bladder.

28 A 29 A 30 A 31 C 32 A 33 B

A. 1 **B.** 2
C. 3 **D.** 4 *(CU9-2056)*

34. The absence of bulbocavernous reflex in ___ is almost always associated with a neurologic lesion, but the reflex is not detectable in up to ____% of otherwise normal___.
A. Women: 10 : men **B.** Men : 30 : women
C. Women : 40 : men **D.** Men : 10 : women *(CU9-2060)*

35. According to the Third International Consultation on Incontinence, a pad weight of more than 1.3 gm over ___ hours is considered a "positive" test.
A. 6 **B.** 12
C. 18 **D.** 24
E. 36

36. "Eyeball urodynamics" is ___
A. Simple cystometry
B. Multichannel urodynamics
C. Free flowmetry
D. Continuous ambulatory urodynamics *(CU9-2064)*

37. The International Continence Society Committee definition of (2002) of overactive bladder is: (CU9-2079)
A. Urgency, with or without urge incontinence
B. Urgency with incontinence
C. Urgency without incontinence
D. A+ usually with nocturia
E. D+ and frequency

38. 'D' grade of recommendation for the drug used in treating detrusor overactivity. (Oxford assessment, modified).
A. Dicyclomine **B.** Flavoxate
C. Propantheline **D.** Solifenacin *(CU9-2093)*

39. ____ is currently, together with oxybutynin, the first-line therapy for patients with overactive bladder - detrosor overactivity.
A. Tolterodine **B.** Darifenacin
C. Solifenacin **D.** Trospium *(CU9-2097)*

40. Tolterodine is superior to Solifenacin in treating overactive bladder in respect to the majority of the efficacy variables.
A. True
B. Solifenacin is superior
C. Non is superior to each other *(CU9-2099)*

34 B 35 D 36 A 37 E 38 B 39 A 40 B

41. Epidemiologic data support a link between consump-tion of ___ with both SUI and OAB with level 2 to 3 evidence
A. Smoking
B. Caffeine
C. Alcohol
D. Carbonated beverages *(CU9-2129)*

42. The following selective nerve stimulation has/have been advocated in treating dterusor overactivity.
A. Pudendal nerve **B.** Dorsal genital nerve
C. Posterior tibial nerve **D.** All of A, B, C
E. Only A and B *(CU9-2159)*

43. Detrusor overactivity is the most common type of lower urinary tract dysfunction in incontinent elderly ___.
A. Males **B.** Females
C. Either sex **D.** Statement is false *(CU9-2309)*

44. Type 1 ____ has the lowest rate of erosion (<3%) and therefore the most commonly used graft in incon-tinence and prolapse repairs.
A. Polyglactin **B.** Polyglycolic acid
C. Polyethylene **D.** Polypropylene *(CU9-2216)*

45. The definition of bladder overactivity (detrusor instability) is the development of a detrusor contraction exceeding ___ H20 at volume < 300 ml.
A. 15 **B.** 25
C. 40 **D.** 50 (*CU9-2774*)

41 D 42 D 43 C 44 D 45 A

7 Sexual Function and Male Infertility

1. **Sperms remain viable within the cervical mucus and crypts for approximately:**
   A. 48 hours **B.** 72 hours
   C. 74 hours **D.** 24 hours *(CU 661)*

2. **Lubricants that have been demonstrated not to impair *in vitro* sperm motility include all, *except:***
   A. Peanut oil **B.** Safflower oil
   C. Vegetable oil **D.** Petrolatum jelly
   E. Saliva **F.** Raw egg white *(CU 662)*

3. **Oligospermia has been found in more than 50 per cent of men with bilateral cryptorchidism and ___ per cent of men with unilateral cryptorchidism:**
   A. 10 **B.** 20
   C. 30 **D.** 40 *(CU 662)*

4. **Approximately 30 per cent patients affected after the ages of 11 to 12 develop unilateral mumps orchitis, whereas ____ per cent may be affected bilaterally:**
   A. 05 **B.** 10
   C. 50 **D.** 60 *(CU 662)*

5. **Oligospermia is identified in approximately ____ per cent or more of testicular cancer and lymphoma patients at the time of diagnosis:**
   A. 30 **B.** 40
   C. 50 **D.** 60 *(CU 662)*

6. **Anosmia is associated with:**
   A. Kallamann's syndrome
   B. Katagener's syndrome
   C. Young's syndrome
   D. Immotile cilia syndrome *(CU 662)*

1 A 2 E 3 C 4 B 5 D 6 A

7. **The frequent use of hot tubs has been found to result in a ____ per cent decrease in sperm motility:**
   A. 10 **B.** 15
   C. 20 **D.** 25 *(CU 663)*

8. **One of the following is not true:**
   A. Decreased testicular size, whether unilateral or bilateral, correlates with impaired spermatogenesis
   B. The normal fertile adult testis is greater than 4 cm in length and greater than 10 ml in volume
   C. Asymmetry of the spermatic cords, accentuated by the Valsalva maneuver, suggests the presence of a varicocele
   D. Thickening and asymmetry of the spermatic cords that persists in the supine position suggests the possibility of a lipoma of the cord
   E. Bilateral thickening of the cords, resolving with the patient in the supine position, suggests the presence of bilateral varicoceles *(CU 663)*

9. **Fewer than ____ per cent of cases of male infertility are due to a primary hormonal abnormality, which is rare in patients with sperm concentrations greater than 5 million sperm/ml:**
   A. 3 **B.** 7
   C. 10 **D.** 5 *(CU 664)*

10. **The semen specimen for analysis should be examined in the laboratory within how many minutes of collection:**
    A. 30 **B.** 60
    C. 90 **D.** 120 *(CU 665)*

11. **Normal semen fructose concentrations ranges from 120 to:**
    A. 200 mg/dl **B.** 250 mg/dl
    C. 350 mg/dl **D.** 450 mg/dl *(CU 667)*

12. **Patients with obstructed seminal vesicles and congenital absence of the seminal vesicles, which is usually associated with bilateral absence of the Vas deferens, demonstrate all but:**
    A. Fructose negative semen
    B. Small volume ejaculate
    C. The pH of the semen greater than eight
    D. Semen that do not coagulate *(CU 667)*

13. **Most commonly, a normal sperm-cervical mucus interaction test result is defined as one in which more than _____ sperms are present/hpf field:**
    A. 5 to 10 **B.** 20 to 40
    C. 10 to 20 **D.** 30 to 40 *(CU 671)*

7 A 8 B 9 B 10 D 11 D 12 C 13 C

14. Which is not *true* in defining a minimally adequate semen specimen?
A. Volume of 1 to 6 ml
B. Total sperm count of more than 50 to 60 million
C. Motility greater than or equal to 60 per cent
D. Forward progression greater than 2
E. More than or equal to 60 per cent of sperms having normal morphology *(CU 669)*

15. Fructose can be detected in human seminal plasma with a reagent composed of 50 mg of powdered ____ and 33 ml of concentrated hydrochloric acid diluted to 1 dl with water:
A. Indole-3-acetic acid **B.** Resorcinol
C. Phenol **D.** Urease *(CU 667)*

16. Find out the correct response about the following statements regarding antisperm antibody: 1. Pregnancy rate is significantly lower in whom the male has demonstrated agglutinating titers greater than 1:64, 2. Between 2 and 30 per cent of fertile men are found to have significant agglutinating antisperm antibody titers, 3. Most investigators feel that only antibodies present on spermatozoal surface are clinically significant, 4. Antisperm antibody has been identified in approximately 60 per cent of men following vasectomy
A. All are true
B. Only 1, 2, and 3 are true
C. Only 2, 3, and 4 are true *(CU 672-673)*

17. Varicocele do not occur with equal frequency on the left and right sides, as approximately 90 per cent are left-sided. Bilateral varicocele occur in about _____ per cent of patients:
A. 5 **B.** 10
C. 15 **D.** 20 *(CU 682)*

18. Although the 'stress pattern' sperm morphology is commonly found in varicocele patients, it is not pathognomonic of varicocele. It is currently recom-mended that varicocele repair be performed in adolescents with grade ____ varicoceles associated with ipsilateral testicular growth retardation:
A. One **B.** Two
C. Three **D.** Two or three
E. One, two or three *(CU 682-683)*

19. Germinal epithelium is very radiosensitive; at doses lower than 18 rad, recovery takes approximately 12 months: azoospermia results from dosages greater than:

14 A 15 B 16 A 17 B 18 D 19 A

A. 50 rad **B.** 100 rad
C. 75 rad **D.** 200 rad *(CU 684)*

20. The septum between two corpora cavernosa is ___ in humans:
A. Complete **B.** Incomplete *(CU 709)*

21. The rigid erection occurs during sexual intercourse and masturbation. Does it occur during nocturnal erection?
A. Yes **B.** No
C. Sometimes it does occur *(CU 712)*

22. During penile erection, the pressure in the corpus spongiosum, the dorsal vein, and the glans is only _____ that in the corpus cavernosum:
A. One-fourth to one-third
B. One-third to one-half
C. One-fifth to one-fourth
D. One-sixth to one-fifth *(CU 713)*

23. Papaverine, nitroglycerine, phentolamine, phenoxybenzamine, moxisylyte, verapamil, trazodone, and prostaglandin (PGE_1) are all erection inducing drugs. This is:
A. True **B.** False *(CU 716)*

24. Phenothiazines, tricyclic antidepressants, haloperidol, methyldopa, reserpine, meprobamate, amphitamine, and opiates are all associated with elevation of serum prolactin and erectile dysfunction. This is:
A. True **B.** False *(CU 716)*

25. At 10 MHz, ultrasonography can clearly visualise all components of the penis. The corpus spongiosum (and urethra) are somewhat in comparison to the echo texture of corpora cavernosa:
A. More echogenic **B.** Less echogenic
C. Isoechoic *(CU 718)*

26. Sensory impotence is characterised:
A. By the inability to maintain a rigid erection as a response to sexual stimulation despite normal nocturnal erections
B. By the inability to maintain a rigid erection and absence of nocturnal erections
C. By the inability to maintain a rigid erection despite normal nocturnal erections and an initially normal response to sexual stimulation *(CU 720)*

20 B 21 A 22 B 23 A 24 A 25 A 26 C

27. The simple and effective treatment with intracavernous injection of an alpha-adrenergic agent like ___, has become the standard for most cases of spontaneous and injection induced priapism:

A. Epinephrine **B.** Adrenaline
C. Noradrenaline **D.** Phenylropanolamine *(CU 723-725)*

28. Which is not an etiology of priapism?

A. Sickle-cell anaemia
B. Intracavernous injection of papaverine, PGE_1
C. Perineal/genital trauma phentolamine singly or in combination
D. Spinal or general anaesthesia
E. Total parenteral nutrition
F. Malignant penile infiltration
G. Intracavernous injection of alpha-adrenergic agents (drug induced) *(CU 723-724)*

29. With today's technology, a man should be considered fertile as long as:

A. A testis is present
B. The genotype is 46 XY
C. The wife has no tubal obstruction
D. The seminal fructose is normal
E. Sperms are present at the level of the rete testis/efferent ductules *(AUA 94-9)*

30. Transrectal ultrasound can be useful in evaluation of all *except:*

A. Teratozoospermia
B. Pyospermia
C. Azoospermia
D. Ejaculatory duct obstruction
E. A low volume of ejaculate *(AUA 94-9)*

31. Measurement of testicular volume is important in evaluation of subfertile male because:

A. Testicular size correlates with the fertility potential
B. Testicular size correlates with testosterone level
C. Testicular size correlates with spermatogenic potential
D. Testicular size correlates with sperm morphology
E. The testis on the side of the varicocele is smaller *(AUA 94-9)*

32. Routine hormonal evaluation of male subfertility might include:

27 A 28 G 29 E 30 A 31 C 32 C

A. LH, FSH, testosterone, GnRH, estradiol
B. LH, FSH, testosterone, ACTH
C. LH, FSH, testosterone, prolactin, estradiol
D. LH, FSH, testosterone, prolactin, TSH
E. LH, FSH, testosterone, prolactin, ACTH *(AUA 94-9)*

33. In infertility evaluation, scrotal ultrasound can be useful in all *except:*
A. Determining testicular size
B. Documentation of varicocele
C. Evaluation of testicular function
D. Identifying an obstructed epididymis
E. Diagnosis of palpable epididymal or testicular mass *(AUA 94-9)*

34. Antisperm antibodies of clinical importance:
A. Are tail bound
B. Are surface bound
C. Are present in sperm
D. Prevent sperm motility
E. Cause sperm caput loss *(AUA 94-9)*

35. A definitive diagnosis of hypogonadotropic hypo- gonadism requires:
A. Lack of secondary sexual characteristics
B. Gynaecomastia
C. Presence of long arms
D. Short fourth metacarpals
E. Serum hormonal evaluation *(AUA 94-9)*

36. Premature disjunction result most commonly in what pathologic finding?
A. Sacral teratomas
B. Primitive neuroectodermal tumours
C. Dermal sinus abnormalities
D. Epidermoid inclusion cyst
E. Lipomyelomeningoceles *(AUA 95-10)*

37. A healthy boy is diagnosed with a varicocele. In a discussion with his parents, which of the following statements most accurately reflects the incidence and natural history of varicocele?
A. They frequently resolve spontaneously
B. Left varicoceles occur three-fold more frequently in infertile than healthy men
C. Bilateral varicoceles are not more common in infertile men than in healthy men

33 C 34 B 35 E 36 E 37 B

D. Varicocele incidence is equal among boys above and below ten years of age
E. Isolated right ventricles are commonly found *(AUA 95-13)*

38. In approximately what percentage of men with a varicocele and infertility is there an abnormal semen parameter?
A. 20 per cent **B.** 40 per cent
C. 60 per cent **D.** 80 per cent
E. 100 per cent *(AUA 95-13)*

39. A 25-year-old male presents with a varicocele. Which of the following conditions is thought to contribute to the genesis of this vascular lesion?
A. Gonadal venous hypotension
B. Renal vein compression by the superior mesenteric artery
C. Left common iliac vein compression by the femoral artery at the pelvic brim
D. A left internal spermatic vein which is 10 cm shorter than the right
E. The parallel insertion of the left internal spermatic vein into the renal vein *(AUA 95-13)*

40. Which of the following most accurately reflects the state of endocrine balance in men with varicoceles?
A. Most varicocele patients have a measurable abnormality of the hypothalamic-pituitary-gonadal axis
B. Gonadotropin-releasing assays in varix testis patients do not normalise postoperatively
C. With an uncorrected varicocele, an endocrine imbalance may worsen with time
D. Characteristically, varicoceles are associated with elevations in both LH and FSH
E. Serum testosterone concentrations in varicocele patients are commonly below normal *(AUA 95-13)*

41. In approximately what percentage of patients will there be a semen parameter improvement after varix ligation?
A. 25 per cent
B. 45 per cent
C. 65 per cent
D. 85 per cent
E. 100 per cent *(AUA 95-13)*

42. Which statement most accurately reflects our knowledge of the varicocele effect on semen parameters?

38 D 39 C 40 E 41 C 42 C

A. The "stress" pattern of semen parameters includes a low count, decreased motility, and normal sperm morphology
B. A classic "stress" pattern is pathognomonic for varicoceles
C. Sperm density, motility and morphology are reduced in quality in the presence of a varicocele
D. Functional deficits in sperm, as measured by penetration assays, have not been found in patients with varicoceles
E. A low sperm count is the most common semen abnormality associated with a varicocele *(AUA 95-13)*

43. A 25-year-old male with one year infertility and a varicocele along with semen abnormal parameters has the varicocele ligated. Which of the following best describes the relationship between semen quality and a varicocele?
A. Certain preoperative semen patterns reliably predict post-operative improvement in semen quality
B. Conception is only associated with cases of improved semen parameters postligation
C. Improvement in sperm counts and motility commonly occur with varix correction, and usually along with one another
D. Improvements in sperm morphology after varix correction are usually unassociated with changes in other semen parameters
E. No improvements in egg fertilizing ability for semen has been shown after varicocele correction *(AUA 95-13)*

44. The accepted gold standard in the diagnosis of varicoceles is:
A. Scrotal thermography
B. Physical examination
C. Scrotal ultrasonography
D. Doppler probe
E. Venography *(AUA 95-14)*

45. All of the following diagnostic methods could have a role in confirmation of the clinical suspicion of a small grade I varicocele *except:*
A. Scrotal ultrasonography
B. Radionuclide angiography
C. Scrotal thermography
D. Venography
E. Doppler probe *(AUA 95-14)*

46. A complication unique to percutaneous ablative therapy for varicocele is:
A. Haemorrhage **B.** Vascular injury
C. Contrast allergy **D.** Hydrocele
E. Varicocele recurrence *(AUA 95-14)*

43 C 44 E 45 B 46 C

47. Which of the following statements is inaccurate regarding testis histology in adolescent varicoceles?

A. The changes seen are similar to those found in adult testes
B. Histological changes are also seen in contralateral testis
C. Histologic changes may precede volume loss of the testis
D. The reversibility of histologic changes can be reliably predicted
E. The sequence of histologic changes that occurs are unknown *(AUA 95-14)*

48. An abnormal GnRH stimulation test is most closely associated with:

A. Varicoceles **B.** Cryptorchidism
C. Infertility **D.** Decreased testis
E. Abnormal testosterone volume levels *(AUA 95-14)*

49. Sperm capacitation in humans has all the following characteristics *except:*

A. It is reversible
B. It is calcium dependant
C. There is no morphologic manifestation
D. It takes five to six hours
E. Involves fusion of plasma membrane and external acrosomal membrane *(AUA 95-18)*

50. At the time of sperm-egg interaction and fertilisation, only one of the following steps is observed:

A. Sperm is immobilised in contact with the cumulus
B. Sperm attaches to species-specific receptors in the corona radiata
C. Sperm attaches to nonspecies-specific receptors in the vitelline membrane
D. The oocyte is in metaphase I of the meiotic division
E. The oocyte discharges cortical granules for rapid block of polyspermia *(AUA 95-18)*

51. What per cent of patients with newly diagnosed testis cancer are felt to be hypofertile prior to any treatment?

A. 1 **B.** 10
C. 20 **D.** 30
E. 40 *(AUA 95-19)*

52. What per cent of patients diagnosed to have testis cancer are felt to be permanently infertile?

A. 15 **B.** 25
C. 35 **D.** 45
E. 55 *(AUA 95-19)*

47 D 48 D 49 E 50 C 51 E 52 B

53. Which agent(s) most commonly causes severe penile pain?
- **A.** Phentolamine
- **B.** Papaverine
- **C.** Prostaglandin E-1
- **D.** Papaverine and phentolamine
- **E.** "Triple agent" *(AUA 95-20)*

54. Urologists often fail to mention to impotent patients the therapeutic option of:
- **A.** Psychological sex therapy counselling
- **B.** Possible medical therapy
- **C.** Vacuum/constriction devices
- **D.** Accepting the loss of vaginal penetration
- **E.** Home pharmacological injection programs

(AUA 95-20)

55. Impotent patients most likely to respond to parenteral testosterone therapy exhibit:
- **A.** Elevated prolactin levels
- **B.** Decreased LH and FSH
- **C.** Free testosterone below 9 ng/dL
- **D.** Poor response to bromocriptine *(AUA 95-20)*

56. The use of intracorporal pharmacotherapy is not recommended in patients:
- **A.** Also using the vacuum constriction device
- **B.** Taking antihypertensive medication
- **C.** On Coumadin therapy
- **D.** Previously treated with pelvic radiation therapy
- **E.** With a history of Peyronie's disease *(AUA 95-20)*

57. Minimal initial dose 'triple agent' should be used in testing patients with:
- **A.** Arteriogenic impotence
- **B.** Venogenic impotence
- **C.** Previous radical prostatectomy
- **D.** Spinal cord injury
- **E.** Previous pelvic fracture *(AUA 95-20)*

58. Venous leak disorder (in impotence cases) is difficult to quantify because of:
- **A.** Variability of the venous drainage of the penis
- **B.** Difficulty in diagnosing decreased sinusoidal-smooth muscle compliance
- **C.** No standard parameters for vavernosometry
- **D.** Limitation of duplex ultrasound
- **E.** Concurrent arterial disease *(AUA 95-20)*

53 C 54 D 55 C 56 C 57 D 58 B

59. Rearterialisation procedures for impotence should be avoided in patients with:
A. Pelvic trauma
B. Previous coronary artery surgery
C. A history of atrial fibrillation
D. Hyperlipidemia
E. Urethral stricture *(AUA 95-20)*

60. When treating priapism induced by intracorporeal pharmacotherapy, the initial step in treatment is:
A. Aspirate 20 to 30 ml of blood from the corpora
B. Inject a dilute solution of phenylephrine into the corpora
C. Administer an oral phenothiazine agent
D. Inject 200 to 400 mcg phentolamine
E. Wrap the penis in an elastic gauze bandage *(AUA 95-20)*

61. Varicocele with a diameter of _____ mm or more are clinically detectable:
A. 2 **B.** 5
C. 8 **D.** 3 *(CU 7 213)*

62. The principal neurotransmitter controlling penile flaccidity and detumescence:
A. Acetylcholine **B.** Nitrous oxide
C. Endothelin **D.** Norepinephrine *(CU 7 1164)*

63. Match the following columns according to the subclassification of psychogenic erectile dysfunction:

A. Anxiety, fear of failure (Widower's syndrome, sexual phobia, performance anxiety, and so on)	1. Type 5
B. Depression (including drug or disease induced depression)	2. Type 4
C. Marital conflict, strained relationship	3. Type 3
D. Ignorance and misinformation (e.g. about normal anatomy, sexual function, or aging), relegious scruples	4. Type 2
E. Obsessive compulsive personality (anhedonia, sexual deviation, psychotic disorders)	5. Type 1

(CU 7 1168)

59 D 60 A 61 B 62 D 63 A-5, B-4, C-3, D-2, E-1

64. Intracavernous injection of ____ may be beneficial in preventing intracavernous fibrosis:
- **A.** PGE 1
- **B.** Papaverine
- **C.** Endotheline
- **D.** Phentolamine methylate *(CU 7 1170)*

65. Find out the wrong statement:
- **A.** Very rarely corpus spongiosum is also involved in priapism
- **B.** Prazocin therapy may cause erectile dysfunction
- **C.** Hemodynamically priapism is of two distinct types: low flow (nonischemic), and high flow (ischemic)
- **D.** Cavernous fibrinolytic activity is three times higher than in peripheral blood *(CU 7 1171-1256)*

66. All of the followings are true *except:*
- **A.** No intercourse or ejaculation is allowed for four to six weeks following crossed vasovasostomy
- **B.** Because the epididymis is a single tubule with a very small diameter, injury or occlusion of a tubule anywhere along its length will lead to total obstruction of output from that epididymis
- **C.** IVF and ICSI is now the treatment of choice for severe uncorrectable male factor infertility
- **D.** Open biopsy methods are most appropriate for testicular sperm retrieval in men with normal spermatogenesis and obstructive azoospermia *(CU 7 1353-1363)*

67. The best technique of testicular sperm retrieval to use in men with severe hypospermatogenesis:
- **A.** Open biopsy
- **B.** Percutaneous core biopsy
- **C.** Percutaneous aspiration *(CU 7 1363)*

68. An ejaculation results from all of the following except___.
- **A.** Androgen deficiency
- **B.** Psychogenic
- **C.** Sympathetic denervation
- **D.** Alfa adrenergic antagonists *(CU9-87)*

69. Peyronie's disease results in fibrosis of_____.

A. *Tunica albiginea* B. Dartos fascia
C. *Buck's fascia* D. *Corpus cavernosa* *(CU9-92)*

64 A 65 C 66 D 67 A 68 B 69 A

70. The counter-current heat exchange in the spermatic cords provides blood to the testes that is ___ lower than the rectal temperature in normal individuals.
A. 1-2°C B. 2-3°C
C. 2-4°C D. 1-3°C *(CU9-582)*

71. Sperm transport through the human epididymis have been observed to require any where from___.
A. 2-12 days **B.** 2-12 hours
C. 2-12 minutes **D.** 2-12 weeks *(CU9-600)*

72. The chance of a normal couple conceiving is estimated to be ___ per month, 75% by six months, and 90% by one year.
A. 10-15% **B.** 15-20%
C. 2-25% **D.** 25-30% *(CU9-609)*

73. Approximately___% of cases of infertility are due entirely to a male factor, with an additional 30-40% of cases involving both male and female factors.
A. 10 **B.** 20
C. 30 **D.** 50 *(CU9-126)*

74. The spermatogenesis may be impaired up to ___ after a febrile illness.
A. Three month **B.** Three days
C. Three weeks **D.** Not affected *(CU9-611)*

75. The WHO defines the following semen parameters as reference values - 1. volume 2 ml or more 2. pH 7.2 or more 3. sperm count 20 million/ml or more 4. total sperm count 40 million/ejaculate or more 5. motility equal to or more than 50% with grade "a+b" motility 6. motility equal to or more than 25% with grade "a" motility 7. morphology 15% or more normal by strict criteria 8. viability equal to or more than 75% 9. WBCs less than 1 million/ml. True is__.
A. All true except 6 **B.** All true
C. 3,4,5,7 only **D.** All but 9 *(CU9-618)*

76. Endocrine abnormality are rarely present when the sperm count is ____ million per ml.
A. Ten **B.** Twenty
C. Five **D.** Two *(CU9-619)*

77. The normal diameter of seminal vesicles or transverse imagine behind the bladder is up to ___, and they are considered dilated beyond that.

70 C 71 A 72 C 73 B 74 A 75 D 76 A 77 A

A. 1.5 cm **B.** 1 cm
C. 5 mm **D.** 3-4 mm *(CU9-628,706)*

78. It has been suggested that an ROS-TAC (reactive oxygen species—total antioxidant capacity) score of ___ is abnormal and associated with infertility.
A. Less than 30 **B.** More than 50
C. Less than 100 **D.** Less than 70 *(CU9-632)*

79. Microdeletion of sections of ___ chromosome have been identified in sapproximately 13% of azzos-permic men and 3 to 7% of oligospermic men.
A. Short arm of Y **B.** Long arm of Y
C. Short arm of X **D.** Long arm of X *(CU9-632)*

80. The intratesticular testosterone concentration is ___ fold higher than serum levels owing to local production.
A. 50 **B.** 200
C. 100 **D.** 150 *(CU9-636)*

81. The androgen insensitivity syndrome (AIS) is ___ linked genetic disorder caused by mutations in the androgen receptor gene.
A. X- **B.** Y-
C. Both X- and Y- **D.** None of A, B, C *(CU9-638)*

82. Androgen receptor gene is located on X chromosome at___, and is inherited as an X-linked recessive trait.
A. Xp6-11 **B.** Xq11-12
C. Xp32 **D.** Xp53 *(CU9-638)*

83. Varicocele repair of grade___should be done in adolescents associated with unilateral testicular growth retardation.
A. I **B.** II
C. III **D.** II or III *(CU9-642)*

84. Testicular atrophy develops in up to 80% of ___ patients during adulthood.
A. Sertoli cell only syndrome
B. Myotonic dystrophy
C. Grade III varicele
D. Noonan's syndrome *(CU9-643)*

85. With cisplatin based chemotherapy, most patients will become azzospermic: however, the majority will recover spermatogenesis with ___.
A. Four years **B.** Six months
C. 72 weeks **D.** Two years *(CU9-644)*

78 A 79 B 80 C 81 A 82 B 83 D 84 B 85 A

86. Semen quality usually returns to base line with ___ after radiotherapy.
A. 24 months **B.** 12 months
C. Six months **D.** Three months *(CU9-644)*

87. Carnitine is found in high concentration in epididymis. They are believed to protect sperms against ___.
A. Radiation damage
B. Chemotherapy damage
C. Oxidative damage
D. Ischemic damage *(CU9-644)*

88. Most common cause of obstructive azzospermia in patients who have not undergone elective sterili-zation:
A. Antisperm anibodies
B. Iatrogenic injury to the Vas
C. Secondary to infection
D. Congenital BL absence of Vas deferens *(CU9-647)*

89. ___ is currently the imaging modality of choice for the evaluation of patients with suspected ejaculatory duct obstruction.
A. TRUS **B.** Vesiculography
C. MRI **D.** CT scanning
E. Chromotubation *(CU9-648)*

90. Testis and epididymis contribute less than ___% to the ejaculate volume.
A. 25 **B.** 20
C. 10 **D.** 05 *(CU9-648)*

91. Penile vibratory stimulation results in ejaculation best in patients with:
A. Upper motor neuron lesions injuries above T10
B. Peripheral neuron lesions after retroperitoneal surgeries
C. Lower motor neuron lesions injuries below T12
D. Drug induced anezaculation *(CU9-649)*

92. There is evidence of increase in sex chromosomal abnormalities in children born from ICSI cycles. This is:
A. True B. False *(CU9-649)*

93. Open testicular biopsy specimen should not be placed in ___ according to a recent study:
A. Formal saline
B. Zenker's solution
C. Bouin's solution
D. Buffered gluteraldehyde solution *(CU9-653)*

86 A 87 C 88 D 89 A 90 D 91 A 92 A 93 A

94. An ultrasound examination demonstrating veins___ mm or more in diameter, with reversal of venous flow after the Valsalva maneuver, is consistent with the diagnosis of varicocele.

A. 3.0 **B.** 2.5
C. 3.5 **D.** 2.0 *(CU9-656)*

95. Marks, McMohan, and Lipshltz identified following preoperative successful repair of varicocele factors associated with an increased likelihood of post-operative pregnancy: 1. lack of testicular atrophy 2. serum FSH levels less than upper normal value 3. sperm density greater than 50 million per ejaculate 4. pH of seminal fluid less than 7.2 5. sperm viability equal or mare than 75% 6. sperm motality of 60% or more.

A. 2-6 true **B.** 1-3 true
C. All true except 4,5 **D.** All true *(CU9-664)*

96. ___% of patients of Peyronie's disease have complete spontaneous resolution of their disease, and 40% of patients experience progression of the disease within one year.

A. 5 **B.** 14
C. 20 **D.** 25 *(CU9-714)*

97. In the flaccid state partial pressure of oxygen (PO_2) is about ___ mm Hg. It increases to about 90 mm Hg during full erection phase.

A. 60 **B.** 50
C. 40 **D.** 25 *(CU9-723)*

98. Which region of fore brain when destroyed results in hyper-sexuality?

A. Pyriform cortex **B.** Medial amygdala
C. Hippocampus **D.** *Stria terminalis* *(CU9-726)*

99. Which region of brain inhibits penile erection?

A. Paraventricular nucleus
B. Periaqueductal gray
C. Locus ceruleus
D. Nucleus paragigantocellularis *(CU9-726)*

100. Testicular atrophy develops in up to 80% of ___ patients during adulthood.

A. Sertoli cell only syndrome
B. Myotonic dystrophy
C. Grade III varicele
D. Noonan's syndrome *(CU9-643)*

94 C 95 D 96 B 97 D 98 A 99 D 100 B

101. Functional association of visual processing is related to which activation region of brain?
A. Right occipital gyrus
B. Right hypothalamus
C. Right insula
D. Left anterior singulate cortex *(CU9-726)*

102. It has been estimated that the minimal concentration of oxygen in the cavernous bodies necessary to reach full nitric oxide synthase activity is ____.
A. 50 - 60 **B.** 60 - 70
C. 70 - 80 **D.** 40 - 50 *(CU9-737)*

103. Melanocortin-4 receptor are implicated in:
A. Control in fluid intake
B. Control of energy expenditure
C. Modulates erectile function and sexual behaviour
D. Both A and B true E) All A, B, C true *(CU9-737)*

104. With the exception of phosphodiesterase (PDE)___, which is specifically expressed in photoreceptor cells, all PDEs have been identified in corpus cavernosum.
A. PDE 6 **B.** PDE 4
C. PDE 7 **D.** PDE 11 *(CU9-736)*

105. Testosterone has little or no effect on 1. fantasy induced erections 2. visually stimulated erections 3. enhancement of sexual interest 4. increase in frequency of sexual act 5. Increase in frequency of nocturnal erections
A. All true except 1 and 2 **B.** All true except 1 and 5
C. All true except 5 and 2 **D.** All true except 4 and 5

106. Drugs not associated with sexual side effects in placebo control studies:
1. Buporpion 2. Nitrazapine
3. Nefazodone 4. Buspirone
5. Tramadol
A. 1 and 5 **B.** 2 and 3
C. 4 and 5 **D.** Only 5
E. 1 and 4

107. Testosterone is normally produced in men at a rate of ___ mg/day, occurring in a pulsatile manner.
A. 4 - 8 **B.** 2 - 4
C. 8 - 12 **D.** 2 - 12 *(CU9-767)*

101 A 102 A 103 E 104 A 105 A 106 E 107 A

108. The most widely used self administered questionnaire:
- **A.** International Index of Erectile Function by Rosen and associates
- **B.** Brief Male Sexual Function Inventory by O' Leasy and colleagues
- **C.** Erectile Dysfunction Inventory for Treatment Satisfaction by Althap and associates
- **D.** Self Erectile Dysfunction Inventory by Cilurzo and colleagues

(CU9-751-2)

109. Color duplex ultrasound accurately assess venogenic erectile dysfunction and should be performed before cavernosometry and canernography.
A. True **B.** False *(CU9-759)*

110. Cilurzo and colleagues (1992) recommended the following all but one as normal NPTR (Nocturnal Penile Tumescence Rigiscan) criteria.
- **A.** Maximal rigidity above 70% at both base and tip
- **B.** One to two erectile episodes per night
- **C.** Mean duration longer than 30 minutes
- **D.** An increase in circumference more than 3 cms at base and more than 2 cm at tip. *(CU9-763)*

111. Aitchison and associates (1990), Muller and associates (1990) and Authors of Campbell Walsh Urology conclude that the Penile Brachial Pressure Index (PBI) is inaccurate and poorly reproducible and suggests no justification for its continued use.
A. True **B.** False *(CU9-762)*

112. The following phosphodiesterase type-5 inhibitor is ineffective without sexual stimulation and resultant nitric oxide release.
A. Sildenafil **B.** Vardanafil
C. Tadalafil **D.** Udenafil
E. None of A,B,C,D *(CU9-773)*

113. Success rate after 20 minutes after medication are much less. Therefore, if patients do not experience a rapid beneficial effect, they should be advised to delay sexual intercourse for one hour (sildenafil) or ___ hour/s hours for tadalafil.
A. Five **B.** Four
C. Three **D.** Two *(CU9-776)*

114. This drug enhances erectile function in men with ED for up to 36 hours and, thus may require less planning and pressure to have sexual intercourse to a schedule.

108 A 109 A 110 B 111 A 112 E 113 D 114 B

A. Slidenafil **B.** Tadalafil
C. Vardenafil **D.** None *(CU9-776)*

115. All of the following nitrates are absolutely con-traindicated in patients taking PDE - 5 inhibitors except:
1. Sublingual nitroglycerine
2. Isosorbide mononitrate
3. Isosorbide dinitrate
4. Amyl nitrite
5. Amyl nitrate

A. Three **B.** Four
C. Both 3 and 4 **D.** None *(CU9-778)*

116. Past use of nitrates that is more than ___ before use of PDE-5 inhibitors, is not considered a contraindication.
A. Seven days **B.** Two weeks
C. Five days **D.** Three days *(CU9-778)*

117. Most potent intracavernous agent./agent com-bination for the treatment and diagnosis of erectile dysfunction.
A. Papaverine **B.** A+Phentolamine
C. Alprostadil **D.** Thymoxamine
E. B + C *(CU9-779)*

118. The dose range of the mixture containing 2.5 ml papaverine (30 mg/ml), 0.5 ml of phentolamine (5mg/ml), and 0.05 ml of alprostadil (500 µg/ml) for intracavernous injection is:
A. 1-2 ml **B.** 0.1 - 1.0 ml
C. 0.5 - 2.0 ml **D.** 0.5 - 1.5 ml *(CU9-780)*

119. Both diagnostic and statistic manual of mental disorders 4th edition revised (DSM-IV-R) and international classification of diseases - 10 (ICD-10) definition refer to this/these as essential component/ components for the diagnosis of premature ejaculation.
A. Short ejaculatory latency
B. Lack of control over ejaculation
C. A+ B+ sexual dissatisfaction
D. Intravaginal ejaculatory latencytime (IVELT) of 2-3 times *(CU9-784)*

120. Meta analysis of drug treatment studies has demonstrated that___exerts the strongest ejaculatory delay.
A. Clomipramin **B.** Sertraline
C. Fluoxetine **D.** Paroxetin
E. Tramadol *(CU9-785)*

115 D 116 B 117 E 118 B 119 C 120 D

121. Poor support of the glans penis by cylinder or rod penile prosthesis tips leads to a drooping appearance of the glans, which is commonly referred to as:

A. SST deformity **B.** CJN deformity
C. STL deformity **D.** CST deformity *(CU9-797)*

122. If one chooses to use vitamin E for peyronie's disease, it should be used in divided doses of 800 - 1000 units a day. The treatment should continue no longer than:

A. 3-6 months **B.** 6-12 months
C. 12-18 months **D.** 2-3 years *(CU9-827)*

123. The following have been used in medical manage-ment of Peyronie's disease.

1. Vitamin E
2. Terfenadine
3. Fexofenadine
4. Colchicine
5. Carnitine
6. Tamoxifen
7. Intravesical verapamil
8. Extra corporeal shock wave therapy
8. Vacuum erection device
9. Interferon alfa-2b
10. PDE-5 inhibitors. *(CU9-827)*

A. All except 8,9,10 **B.** All
C. All except 9 **D.** All except 8,9

124. The WHO concensus (Lue et al 2004) reported that the operation of excision of Peroney's plaque with dermal graft is regarded as outmoded.

A. True **B.** False
C. No such statement made *(CU9-830)*

125. The following is/are true about priapism:

1. Defined as pathologic condition of penile erection characterized as prolonged and devoid of sexual stimulation or excitement
2. Priapism of clitoris does not occur
3. Corpus spongiosum may similarly become tume-scent
4. Pain is common although this feature is not a requirement for the designation of priapism
5. Occurs only with sexual stimulation or excitement

121 A 122 A 123 B 124 A 125 A

A. All except 2, 5 are ture
B. Only 1 is true
C. Only 6 is true
D. All true *(CU9-839)*

126. The term stuttering priapism is used in reference to the frequently occurring episodes of priapism observed in __.
A. Drug induced priapism
B. Sickle cell patients
C. Refractory priapism
D. Neurogenic priapism *(CU9-843)*

127. Cavernous blood gas determination in patients with ischemic priapism typically shows a PO_2 of <30 mm Hg, PCO_2 > 60 mm Hg, and pH below 7.25: that with nonischemic priapism commonly shows:
A. PO_2 > 90, PCO_2 < 40, pH 7.4
B. PO_2 of 100, PCO_2 > 30, pH 7.4
C. PO_2 > 90, PCO_2 < 60, pH 7.4
D. PO_2 > 60, PCO_2 > 60, pH 7.4 *(CU9-845)*

128. Testosterone therapy in elderly males leads to: 1. Decrease in total and low density lipoprotein cholesterol levels 2. No change or small decrease in high density lipoprotein cholesterol level.
A. Both true **B.** Both false
C. Only 1 is true **D.** Only 2 is true *(CU9-859)*

129. If any motile sperm are found in ejaculate ___ months after an elective bilateral vasectomy, the procedure should be repeated.
A. Three **B.** Six
C. Four **D.** Five *(CU9-1102)*

130. ___ejaculate semen as firm pellet.
A. Bull **B.** Dog
C. Rat **D.** Guinea pig
E. C and D *(CU9-2725)*

131. Semen of ____does not coagulate.
A. Bull **B.** Dog
C. Guinea pig **D.** Rat
E. A and B *(CU9-2725)*

132. The androgen receptor expression in the penis decreases to negligible rates at the completion of ____.
A. Puberty **B.** 50 Years of age
C. 70 years of age **D.** Childhood *(CU9-2729)*

126 B 127 A 128 A 129 A 130 E 131 E 132 A

133. The toxic effect of varicocele may be manifested as testicular growth failure, semen abnormalities, Leydig cell dysfunction ranging from atrophy to hyperplasia, and the following best matched histologic changes.

A. Tubular thickening, intestinal fibrosis, decreased spermatogenesis, maturation arrest.

B. Tubular thickening, intestinal fibrosis, decreased spermatogenesis

C. Tubular thickening, intestinal fibrosis, asthenozo-spermia, oiigospermia

D. Tubular thickening, hyperfusin hypoxic injury, local hormonal imbalance *(CU9-3794)*

134. The dose associated with a 5% risk for the occurrence of the clinical end point (sterility) noted 5 years with whole organ radiation tolerance of testis for fractional radiotherapy is _____ cGY.

A. 100 **B.** 200

C. 300 **D.** 400 *(SU16-417t)*

133 A 134 A

8 Urinary Tract Infection

1. **What for the 'Fairly bladder washout test' is done?**
   A. Differentiating kidney from bladder infection
   B. Urine culture
   C. Urine cytology
   D. Detecting fungal infection *(CU 739)*

2. **Antibody-coated bacteria could be seen under a fluorescence microscope; the usefulness of this technique is in separating renal from bladder infection. These antibody-coated bacteria are from:**
   A. Kidney infection **B.** Bladder infection *(CU 739 CMC)*

3. **It has been found that 5 minutes after transrectal prostatic needle biopsy ____ per cent of patients had bacteraemia proved by blood culture. Over half the organisms isolated were anaerobic. They have found that a fluoroquinolone given several hours before the procedure and continued for 24 hours following the procedure is effective:**
   A. 56 **B.** 66
   C. 76 **D.** 86
   E. 96 *(CU 747)*

4. **Catheter-associated bacteriuria may originate from:**
   A. Periurethral and perineal organisms
   B. Organisms infecting the collecting bag or collecting device
   C. Bacterial infection caused by opening the closed system for irrigation, changes in tubing or emptying the collecting bag
   D. B and C
   E. All of A, B, and C *(CU 747)*

5. **The most common condition associated with papillary necrosis is:**
   A. Analgesic abuse
   B. Diabetes mellitus
   C. Hypotensive shock
   D. Sickle cell haemoglobinopathies *(CU 757)*

1 A 2 A 3 C 4 E 5 B

6. The most common aetiologic organism of emphysematous pyelonephritis (that occurs in diabetics) is:
A. *E. coli* **B.** *P. mirabilis*
C. *P. aeruginosa* **D.** *Klebsiella* *(CU 757)*

7. Of the gram-positive organisms, only *Streptococcus* _____ and, less commonly, *Staphylococcus aureus* are important causes of pyelonephritis:
A. *Viridans* **B.** *Pyogenes*
C. *Salivarius* **D.** *Faecalis* *(CU 759)*

8. The duration of therapy for acute pyelonephritis generally should be:
A. 7 days **B.** 14 days
C. 21 days **D.** 6 weeks *(CU 760)*

9. The best technique for diagnosing chronic pyelonephritis is:
A. Intravenous urogram
B. Renal ultrasound
C. Computed tomography
D. Renal angiogram *(CU 760)*

10. Intravenous urogram, showing focal coarse renal scarring with clubbing of the underlying calyx is characteristic of:
A. Acute pyelonephritis
B. Chronic pyelonephritis
C. Xanthogranulomatous pyelonephritis
D. Malacoplakia *(CU 761)*

11. The histopathological description of 'renal thyroidisation' has been described in:
A. Renal tuberculosis
B. Chronic pyelonephritis
C. Pyonephrosis
D. Renal papillary necrosis *(CU 761)*

12. Xanthogranulomatous pyelonephritis presents with flank pain, fever and chills, and persistent bacteriuria; which organism is most commonly associated with it:
A. *E. coli* **B.** *Proteus*
C. *Staphylococcus* **D.** *P. aeruginosa* *(CU 766)*

13. Presence of ___, which simulate renal carcinoma cells, are characteristic of xanthogranulomatous pyelonephritis:

6 A 7 D 8 B 9 A 10 B 11 B 12 B 13 D

A. Von Hanseman cells
B. Michaelis-Gutmann bodies
C. Clasmatocytes
D. Xanthoma cells (lipid-laden histiocytes) *(CU 766)*

14. The ratio of females to males with malacoplakia within the urinary tract is:
A. 4:1 **B.** 5:1
C. 1:1 **D.** 1:3 *(CU 767)*

15. The most common organism causing gram-negative bacteremia is:
A. Anaerobic organisms **B.** *E.coli*
C. *P.aeruginosa* **D.** *Proteus* *(CU 769)*

16. Surveys screening for bacteriuria have shown that about 4 per cent of young adult women have bacteriuria; this figure increases by an additional 1 to 2 per cent per decade of age; this, in school girls, (5 to 14 years) is about:
A. 1 per cent **B.** 5 per cent
C. 10 per cent **D.** 15 per cent *(CU 771 CMC)*

17. Drug that does not alter the gut flora is:
A. Trimethoprim **B.** Nitrofurantoin
C. Cephalexin **D.** Norfloxacin *(CU 787)*

18. Which drug has been commonly used to treat bacteriuria during the first two trimesters of pregnancy, but may be contra-indicated at term because it can cause a haemolytic anaemia, in neonates?
A. Nitrofurantoin **B.** Trimethoprim
C. Chloramphenicol **D.** Cephalosporines *(CU 787)*

19. One of the following is a wrong statement:
A. Renal length increases approximately 1 cm during normal pregnancy; no histologic changes have been identified in renal biopsies
B. Progesterone-induced smooth muscle relaxation also may cause an increased bladder capacity
C. Glomerular filtration increases by 30 to 50 per cent, and urinary protein excretion increases during normal pregnancy
D. Bacteriuria in the symptomatic pregnant female should be treated, and in the asymptomatic females should not be treated, to avoid pyelonephritis and its possible sequelae in the mother *(CU 790-794)*

14 A 15 B 16 A 17 B 18 A 19 D

20. Although little is known about the outcome of pregnancies with varying degrees of renal insufficiency, it is known that normal pregnancy is rare if preconception serum creatinine exceeds:
A. 3 mg/dl **B.** 4 mg/dl
C. 0.5 mg/dl **D.** 6 mg/dl *(CU 794)*

21. At least 20 per cent of women and 10 per cent of men older than 65 years of age have bacteriuria. In contrast to young adults where bacteriuria is 30 times more prevalent in women than in men, the ratio in women to men with bacteriuria progressively decreases to:
A. 1:1 **B.** 2:1
C. 3:1 **D.** 4:1 *(CU 795)*

22. For the accurate diagnosis of chronic bacterial prostatitis, the counts of pathogenic bacteria in the prostatic specimens should exceed by—or more the counts in the VB1 and VB2 specimens:
A. 5 fold **B.** 10 fold
C. 15 fold **D.** 20 fold *(CU 810)*

23. The preferred initial therapy in patients who have acute bacterial prostatitis is and if the pathogen is susceptible and the clinical response satisfactory, treatment is continued for 30 days to prevent chronic bacterial prostatitis:
A. Cotrimoxazole **B.** Trimethoprim
C. Erythromycin **D.** Cephalosporines *(CU 814)*

24. The response to therapy using corticosteroids is usually dramatic in:
A. Chronic abacterial prostatitis
B. Prostatodynia
C. Eosinophilic prostatitis
D. Parasitic prostatitis *(CU 819)*

25. For a man, the risk of acquiring gonorrhoea during a single episode of intercourse with an infected partner is approximately:
A. 17 per cent **B.** 27 per cent
C. 37 per cent **D.** 47 per cent *(CU 825)*

26. The currently recommended drug of choice for the treatment of all uncomplicated gonococcal infections of the pharynx, anorectum, cervix and urethra is:
A. Ceftriaxone **B.** Spectinomycin
C. Norfloxacin **D.** Ceftizoxime *(CU 826)*

20 A 21 B 22 B 23 A 24 C 25 A 26 A

27. The most important and potentially dangerous pathogen involved in nongonococcal urethritis is:
A. *Ureaplasma urealyticum*
B. *Chlamydia trachomatis*
C. *Trichomonas vaginalis*
D. Herpes simplex virus *(CU 827)*

28. Recurrence of nongonococcal urethritis by resistance to tetracycline therapy is almost never due to:
A. C.*trachomatis*
B. *Ureaplasma urealyticum*
C. *T.vaginalis*
D. *Gardnerella vaginalis* *(CU 828)*

29. Infertility is more likely to occur in patients with nongonococcal rather than gonococcal pelvic inflammatory disease. This is:
A. True **B.** False *(CU 829)*

30. Acute epididymitis is a clinical syndrome resulting from inflammation, pain, and swelling of the epididymis of less than:
A. 6 weeks **B.** 5 weeks
C. 4 weeks **D.** 2 weeks *(CU 830)*

31. Although epididymitis is uncommon in children, the most common cause of epididymitis is the:
A. *H. influenzae* **B.** Coliforms
C. *Staphylococcus aureus* **D.** *C. trachomatis* *(CU 831 JIPMER)*

32. A truly noninfectious cause of epididymitis has been described secondary to treatment with the antiarrhythmic drug:
A. Procainamide **B.** Disopyramide
C. Amiodarone **D.** Maxiletine *(CU 831)*

33. The best culture media to use for the diagnosis of *Trichomonas vaginalis* is:
A. Diamond's medium
B. New York City media
C. Thayer-Martin medium
D. MacConkey media *(CU 833)*

34. Type I herpes, which is commonly associated with oral infections, has been reported in _____ per cent of genital infections:
A. 10 to 25 **B.** 5 to 10
C. 30 to 50 **D.** Less than 5 *(CU 835)*

27 B 28 A 29 A 30 A 31 B 32 C 33 A 34 A

35. In college students, __ infections are ten times more common than gonorrhea or syphilis:
A. Genital herpes simplex virus
B. Chancroid
C. Granuloma inguinale
D. Lymphogranuloma venereum *(CU 837)*

36. Which type of herpes simplex virus infection causes 90 per cent of recurrent genital herpes?
A. Type I **B.** Type II
C. Both types with equal frequency *(CU 837)*

37. In contrast to primary herpes, recurrent disease is often:
A. Unilateral **B.** Bilateral *(CU 837)*

38. Herpes simplex virus encephalitis is associated with a mortality rate of _____ per cent and is usually associated with type I virus:
A. 50 **B.** 60
C. 70 **D.** 80 *(CU 837)*

39. Which of the following is the most sensitive way for diagnosing herpes virus infection?
A. Vesicles grouped on an erythematous base that do not follow a neural distribution
B. Papanicolaou smears of lesions demonstrating intranuclear inclusions
C. Immunofluorescent techniques
D. Virus isolation by culture *(CU 837)*

40. What is the dosage of intravenous acyclovir for treating genital herpes virus infection?
A. 10 mg/kg Q 8H for 5 days
B. 5 mg/kg Q 8H for 5 days
C. 5 mg/kg Q 4H for 10 days
D. 10 mg/kg five times per day for 5 days *(CU 838)*

41. Which of the following statements is false?
A. In the treatment of recurrent herpes, topical acyclovir has shown little effect
B. Prophylactic oral acyclovir decreases recurrence of herpes infection
C. Unlike the treatment for other STDs, resistance to acyclovir is yet to occur
D. In any form, acyclovir decreases the duration of viral shedding, time to crusting of lesions, and time to healing of lesions *(CU 838-839)*

35 A 36 B 37 A 38 C 39 D 40 B 41 C

42. The most specific and best test for diagnosing *Lymphogranuloma venereum* is:
A. Culture of *C. granulomatis*
B. Culture of *C. trachomatis*
C. Flei skin test
D. Histological examination of the lesion *(CU 839)*

43. The preferred treatment for *Lymphogranuloma venereum* is:
A. Doxycycline 100 mg BD for 20 days
B. Tetracycline 500 mg 4 times per day for 21 days
C. Erythromycin 500 mg 4 times per day for 21 days
D. Sulfisoxazole 500 mg 4 times per day for 21 days
(CU 839)

44. Chancroid is caused by:
A. *H. ducreyi* **B.** *C. trachomatis*
C. *C. granulomatis* **D.** *T. Pallidum* *(CU 839)*

45. The current recommendation for the treatment of scabies is:
A. Crotamiton 10 per cent
B. Lindane 1 per cent
C. Permethrin 1 per cent *(CU 841)*

46. Which of the following genital ulcers has a red and rough ("beefy") base?
A. Syphilis **B.** Herpes
C. Chancroid **D.** LGV
E. Donovanosis *(CU 835)*

47. The primary site specific treatment of genital warts is cryotherapy for all of the following *except:*
A. Vaginal **B.** Cervical
C. Meatal **D.** Urethral
E. Anorectal *(CU 842)*

48. AIDS was first described in:
A. 1981 **B.** 1991
C. 1983 **D.** 1982 *(CU 847)*

49. The primary manifestation of HIV infection is the depletion of a particular type of T-cell:
A. $CD8^+$ **B.** $CD6^+$
C. $CD4^+$ **D.** $CD2^+$ *(CU 849)*

50. The only species so far, besides humans, that is susceptible to infection with HIV is:
A. Chimpanzees **B.** Monkeys
C. Syrian hamsters **D.** Armadillo *(CU 850)*

42 B 43 A 44 A 45 B 46 E 47 D 48 A 49 C 50 A

51. The centers for disease control (CDC) system classifies HIV-infected-persons into four categories; Asymptomatic infection is in:
A. Class I **B.** Class II
C. Class III **D.** Class IV *(CU 852)*

52. The ELISA for HIV antibodies remains negative for —months despite appearance of specific antibodies on the Western Blot:
A. 1 to 2 **B.** 2 to 3
C. 3 to 4 **D.** 4 to 5 *(CU 853)*

53. The average risk of HIV infection from a single heterosexual contact may be less than ___ per cent:
A. 0.1 **B.** 01
C. 10 **D.** 0.05 *(CU 854)*

54. It is possible for an infected donor to transmit HIV during the 'window period' prior to development of antibodies; this period is generally estimated to be ____ months or less:
A. One **B.** Two
C. Three **D.** Four *(CU 855)*

55. The risk of seroconversion following exposure to HIV seropositive patients through a needlestick injury appears to be less than:
A. 0.1 per cent **B.** 01 per cent
C. 10 per cent **D.** 0.05 per cent
E. 0.5 per cent *(CU 855)*

56. The risk for hepatitis B infection from an accidental needlestick is estimated at ___ per cent per stick:
A. 0.12 **B.** 12
C. 1.2 **D.** 0.5 *(CU 855)*

57. Safe sexual practices by all persons on concurrent antiviral therapy for HIV are not recommended:
A. True **B.** False *(CU 857)*

58. Hailey-Hailey disease is:
A. Darter's disease
B. A contact dermatitis of genital region
C. Familial benign chronic pemphigus
D. Erythroplasia of Queyrat *(CU 870)*

59. Bowen's disease refers to lesions on keratinising surfaces; the lesions occurring on the glans and inner aspects of the prepuce are referred to as:

51 B	**52 B**	**53 A**	**54 C**	**55 E**	**56 B**	**57 B**	**58 C**	**59 A**

A. Erythroplasia of Queyrat
B. Extramammary Paget's disease
C. Bowenoid papulosis
D. Pearly penile papules *(CU 870)*

60. Lichen sclerosus is:
A. Plasma cell balanitis
B. Zoon's balanitis
C. Balanitis xerotica obliterans
D. Neurodermatitis of genital region *(CU 872 JIPMER)*

61. A suspected diagnosis of erythrasma is confirmed clinically by a rapid response to orally administered:
A. Ciprofloxacin **B.** Erythromycin
C. Tetracycline **D.** Chloramphenicol *(CU 874)*

62. Evenly pigmented nevi that are smaller than ___ in diameter need not be removed or biopsied if the patient can state that they have been present and unchanged for at least several years:
A. 5 mm **B.** 6 mm
C. 7 mm **D.** 8 mm *(CU 879)*

63. Which of the following is not *true* about pearly penile papules:
A. These lesions are found on the corona of the glans penis as closely set, but not confluent, papules about 1 mm in diameter
B. They may be white, pink or red
C. The papules generally encircle the corona in carefully aligned rows: one, two or three rows may be present
D. These lesions need to be treated with topical steroids *(CU 880)*

64. Which of the following account for 90 per cent of urogenital lymphatic filariasis?
A. *Wuchereria bancrofti* **B.** *Brugia malayi*
C. *Brugia timori* **D.** Dirofilaria *(CU 907)*

65. Human occult filariasis is characterised by circulating eosinophilia, eosinophilic infiltrates of affected lymph nodes or lung, and granulomas around damaged microfilariae. Microfilariae are often surrounded by stellate hyalin precipitates___:
A. Splendore-Hoeppli bodies
B. Meyers-Kouvenaar bodies
C. Michaelis-Gutmann bodies
D. Von Hanseman bodies *(CU 909)*

66. Which of the following drugs, in a single oral dose of 20 to 25 ug/kg, has proved to be an effective microfliaricide, nearly

60 C 61 B 62 C 63 D 64 A 65 B 66 B

comparable with DEC with perhaps fewer toxic and side reactions?

A. Diethylcabamazine **B.** Ivermectin
C. Acrivastine **D.** Lovastatin *(CU 915)*

67. In invasive infections by *Entamoeba histolytica*, the kidney is the ___ most common site of abscess localisation:

A. Third **B.** Fourth
C. Fifth **D.** Sixth *(CU 918)*

68. *1. Strongyloides stercoralis 2. Toxocara canis 3. Armillifera armillatus 4. Vandelia cirrhosa.* Out of these which are stray parasites of urogenital organs?

A. 2, 3, and 4 **B.** All
C. Only 3 and 4 **D.** None *(CU 918-919)*

69. Urinary schistosomiasis is most commonly caused by:

A. *S. haematobium*
B. *S. mansoni*
C. *S. japonicum*
D. *S. intercalatum* *(CU 886)*

70. Although worms of *S. haematobium* live only three to four years, the active stage of urinary schistosomiasis averages — to — years:

A. 6-8 **B.** 8-10
C. 10-12 **D.** 12-13 *(CU 886)*

71. In schistosomiasis, calcific tissue egg burdens above— per gram are detectable radiologically:

A. 20,000-30,000
B. 10,000-15,000
C. 5,000-8,000 *(CU 891)*

72. The classic clinical presentation of active bilharziasis is:

A. Haematuria, proteinuria, pyuria
B. Haematuria and terminal dysuria
C. Growth retardation and anaemia
D. Recurrent UTI *(CU 893)*

73. Diagnostic of *S. haematobium* infection:

A. Detection of terminally spined eggs in urinary sediments
B. Ziehl-Neelsen stain of the histopathological section
C. Enzyme-linked immunosorbent assay
D. Circumoval precipitation test using *S. haematobium* eggs collected from patient's urine *(CU 894)*

67 C 68 B 69 A 70 D 71 A 72 B 73 A

74. Of the schistosomes that are pathogenic to humans, which is the most amenable to treatment?
A. *S. haematibium* **B.** *S. mansoni*
C. *S. japonicum* **D.** *S. intercalatum* *(CU 896)*

75. The drug of choice for *S. haematobium* infection in its endemic setting is:
A. Metrifonate **B.** Niridazole
C. Oltipraz **D.** Praziquantel *(CU 897)*

76. The drug of choice in combined *S. mansoni* and *S. haematobium* infections:
A. Niridazole **B.** Praziquantel
C. Oltipraz **D.** Metrifonate *(CU 898)*

77. *Not true* of bilharzial bladder cancer:
A. The syndrome presents with an early onset (40–50 years of age)
B. High frequency of squamous cell carcinomas (60–90%) and adenocarcinomas (5–15%)
C. Ulcerative endophytic tumours constitute nearly 70 per cent of them
D. Necroturia is more frequent than in non-schistosomal bladder cancers *(CU 902-903)*

78. Three types of hydroureter are associated with schistosomal obstruction. Nearly 80 per cent of which type are found in the lower ureter?
A. Segmental ureteral dilatations
B. Tonic hydroureter
C. Atonic hydroureter *(CU 904)*

79. The treatment of choice for genitourinary blastomycosis:
A. IV amphotericin B
B. Oral ketoconazole
C. Oral flucytosine
D. IV fluconazole *(CU 930)*

80. The radiological findings of which of the following disease may be similar to tuberculosis, 'moth-eaten calyces', infundibular stenosis, and renal calcification:
A. Blastomycosis **B.** Histoplasmosis
C. Coccidioidomycosis **D.** Zygomycosis *(CU 931)*

81. In disseminated infection peripheral blood smears may demonstrate interleukocytic budding yeast:

74 A 75 A 76 B 77 C 78 A 79 A 80 C 81 A

A. Histoplasmosis **B.** Geotrichosis
C. Mucormycosis **D.** Sporotrichosis *(CU 932)*

82. What is significant candiduria?
A. More than 10,000 to 15,000 colonies per ml
B. More than 1,000 to 2,000 colonies per ml
C. More than 3,000 colonies per ml
D. More than 25,000 to 30,000 colonies per ml *(CU 938)*

83. *True* about amphotericin B:
A. It crosses the placenta; however, penetration into the CSF, vitreous tumour, and normal amniotic fluid is minimal
B. Renal toxicity occurs even if it is used as a bladder irrigant
C. Renal excretion is the primary route of elimination
D. Haemodialysis immediately clears the drug from plasma *(CU 944)*

84. It is a triazole, has a narrow spectrum of antifungal activity but achieves good renal excretion:
A. Ketoconazole **B.** Miconazole
C. Fluconazole **D.** Flucytosine *(CU 947)*

85. The ideal pH for growth of *Candida* fungi ranges from:
A. 5.1 to 6.4 **B.** 6.2 to 7.4
C. 7.4 to 8.2 **D.** 6.0 to 8.0 *(CU 947)*

86. Which of the following antituberculous drugs was discovered first?
A. Streptomycin **B.** Isoniazid
C. Rifampicin **D.** Para-aminosalicylic acid *(CU 952)*

87. Which is the most virulent and infective of all mycobacteria?
A. *M. kensarii* **B.** *M. bovis*
C. *M. africanum* **D.** *M. tuberculosis* *(CU 954)*

88. The site most commonly affected by tuberculosis of the ureter is:
A. Ureterovesical junction
B. Pelviureteric junction
C. Midureter
D. Intramural portion of the ureter *(CU 958)*

89. Which is *not true* about tuberculosis of the urinary bladder?
A. Bladder lesions are without exception secondary to renal tuberculosis
B. The earliest forms of infection starts around ureteric orifice
C. Tuberculous ulcers are frequent and are an early finding

82 A 83 A 84 C 85 A 86 A 87 D 88 A 89 C

D. The fibrosis starts around the ureteric orifice, which contracts and can either produce a stricture or become withdrawn, rigid, and dilated, assuming the classic 'golf-hole' appearance *(CU 958)*

90. Find out the incorrect statement:
A. Tuberculosis of the testis is nearly always secondary to infection of the epididymis
B. Tuberculous foci in the epididymis are the result of metastatic spread of organisms via blood-stream
C. The disease usually starts in the globus major because of its greater blood supply compared with other parts of the epididymis
D. The disease usually develops in young, sexually active males, and in 70 per cent of patients there is a previous history of tuberculosis *(CU 958)*

91. In tuberculosis of the prostate:
A. It is almost always secondary to infection of the epididymis
B. The route of infection is through the haematogenous spread of organisms
C. Even in advanced disease there is no reduction in the volume of the semen
D. On palpation, the gland is nodular, hardly ever tender, and frequently enlarged *(CU 960)*

92. In the survey done in India,___per cent of patients with pulmonary TB also had genitourinary lesions:
A. 50 **B.** 40
C. 30 **D.** 20 *(CU 961)*

93. A superimposed infection is found in 20 per cent of cases of genitourinary tuberculosis, 90 per cent of which are due to:
A. *E. coli* **B.** *Proteus*
C. *Klebsiella* **D.** *Pseudomonas aeruginosa* *(CU 961)*

94. Statement 1: For the diagnosis of tuberculosis, a positive tuberculin test is of more help when it is known that a previous test was negative;Statement 2: Most secondary infections associated with genitourinary tuberculosis are controlled by a combination of streptomycin and rifampicin:
A. Statement 1 is correct **B.** Only 2 is correct
C. Both 1 and 2 are true *(CU 963)*

95. Statement 1: Ureteric calcification is very uncommon unless there is extensive renal calcification; Statement 2: In a plain radiograph, all calcification is intraluminal and appears as a cast of the ureter, which is thickened and not dilated; Statement 3:

90 C 91 B 92 D 93 A 94 C 95 E

In a plain radiograph, the calcification is mural and the ureter is generally dilated and tortuous

A. All the statements are true of tuberculosis
B. All the statements are true of bilharziasis
C. 1 and 2 are true of tuberculosis
D. 1 and 3 are true of schistosomiasis
E. 3 is true of bilharziasis, and 1 and 2 are true of tuberculosis *(CU 963)*

96. In a case of genitourinary tuberculosis, arterio-graphy has one important application:

A. For assessing the renal parenchymal damage
B. For delineating arterial circulation when partial nephrectomy is being planned
C. For it can mark the precise area of destruction of a kidney, which is often more extensive than would be suggested by IVU
D. When there is a possibility of coincidental renal tumour with it *(CU 967)*

97. Bladder biopsy is contraindicated in the presence of acute tuberculous cystitis or even when there are areas of inflammation, either in the bladder or close to the ureteric orifice, that are suggestive of tuberculosis:

A. This statement is false
B. This statement is true *(CU 967)*

98. Which of the following antituberculous drugs is bacteriostatic?

A. Isoniazid **B.** Ethambutol
C. Pyrazinamide **D.** Streptomycin *(CU 968)*

99. High doses of steroids may be useful to alleviate severe bladder symptoms in cases of acute tuberculous cystitis when given with four antituberculous drugs; this high dose of steroid is required because ____reduces the effectiveness and bioavailability of prednisolone:

A. Rifampicin **B.** Isoniazid
C. Pyrazinamide **D.** Ethambutol *(CU 972)*

100. It should be the rule that ____ are not used in the presence of tuberculous renal failure:

A. Rifampicin and INH
B. INH and streptomycin
C. Ethambutol and rifampicin
D. Streptomycin and ethambutol *(CU 974)*

96 D 97 B 98 B 99 A 100 D

101. What should be the next modality of management for a localised polar tuberculous lesion containing calcification that has failed to respond after 6 weeks of intensive chemotherapy?

A. Continue intensive chemotherapy for another 6 weeks and then assess
B. Nephrectomy, if the other kidney is present and functioning
C. Partial nephrectomy
D. Go for a percutaneous kidney biopsy because coexisting renal carcinoma is also a possibility *(CU 975)*

102. Which of the following is an incorrect step/procedure while doing epididymectomy for a caseating tuber-cular epididymal abscess that is not responding to chemotherapy?

A. Epididymectomy being performed through a scrotal incision
B. The globus minor is dissected first, followed by the body, and finally the globus major
C. The vas is then isolated and brought out in the groin through a separate stab incision to prevent the formation of a subcutaneous abscess
D. Ligation of the contralateral vas is also to be done in the same sitting *(CU 976)*

103. All patients of genitourinary tuberculosis should have at least ____ weeks of extensive chemotherapy before surgery:

A. 4 **B.** 6
C. 8 **D.** 2 *(CU 979)*

104. It is now well-accepted by most authorities that 'Hunner's ulcer' are only rarely present with:

A. Acute tubercular cystitis
B. Schistosomal disease of the bladder
C. Interstitial cystitis
D. Candidial infection of the bladder *(CU 982)*

105. What is the aetiology of interstitial cystitis?

A. Infection
B. Not known
C. Lymphovascular congestion
D. Psychoneurotic abnormalities
E. Irritative substances in urine

106. The diagnosis of interstitial cystitis is primarily based on:

A. Clinical and cystoscopic criteria
B. Radiologic studies
C. A classical histopathologic picture
D. Urodynamic studies *(CU 987)*

101 C 102 D 103 A 104 C 105 B 106 A

107. Treatment of interstitial cystitis may include all of the following *except:*
A. Hydraulic distention
B. Intravesical DMSO
C. Intravesical chlorpectin
D. Intravesical alpha blocker
E. Amitriptyline *(CU 989-994:AUA'93-8)*

108. The incubation period of condyloma acuminata is approximately:
A. One to two weeks
B. Two to four weeks
C. Three to four months
D. Four to six weeks
E. Greater than four months *(AUA 94-13)*

109. The association of HPV with male urogenital pre-cancerous and cancerous lesions is strongest for:
A. Bladder cancer **B.** Prostate cancer
C. Kidney cancer **D.** Penile cancer
E. Scrotal cancer

110. A specific cytopathic effect of HPV is:
A. Hyperchromasia **B.** Nuclear enlargement
C. Koilocytosis **D.** Acanthosis
E. Hyperkeratosis *(AUA 94-13)*

111. This test is performed to definitely detect subclinical HPV infection:
A. Vinegar test
B. Histologic examination of the biopsy material
C. Growth of HPV in cell culture
D. Cytology of urethral brushings
E. Nucleic acid hybridization tests *(AUA 94-13)*

112. The most sensitive technique to detect HPV DNA material is:
A. *In situ* hybridization
B. Polymerase chain reaction
C. Dot blot hybridization
D. Southern hybridization
E. Electron microscopy *(AUA 94-13)*

113. The best therapy for condyloma resistant to local treatment is:
A. Podofilox **B.** Cryotherapy with liquid nitrogen
C. Laser ablation **D.** Intralesional interferon
E. Surgical excision *(AUA 94-13)*

107 D 108 D 109 D 110 C 111 A 112 B 113 C

114. What statement best applies to subclinical HPV infection?
A. Cure rates approach 70 per cent
B. Treatment should be discouraged
C. Acetowhite spots with the vinegar test are diagnostic
D. Once HPV infection is present, it remains for ever
E. The incubation period and rates of transmission have recently been established *(AUA 94-13)*

115. Testicular scans to assess for torsion should be:
A. Always obtained before any surgical exploration
B. Obtained if you suspect torsion
C. Ordered in advance by telephone
D. Obtained within one hour or not at all
E. Most useful if the scrotal pain has lasted more than 24 hours *(AUA 94-19)*

116. Which clinical examination is helpful only if it is present because it almost certainly excludes testicular torsion?
A. Cremasteric reflex
B. Elevation of scrotum does not relieve pain
C. Nontender testis
D. Moderately tender prostate on PR *(AUA 94-19)*

117. A mother notes a bloody urethral discharge on the undergarments, and the child has no complaints. A urinalysis and culture both are negative and the physical examination is within normal limits. Management should consist of:
A. IVP **B.** Cystoscopy
C. VCUG **D.** Six months of antibiotic therapy
E. Reassurance and follow-up in six months *(AUA 94-19)*

118. An undescended testis poses a slight risk of malignancy. At what age does the risk of surgery and orchiopexy or orchiectomy outweigh the risk of testis cancer?
A. 5 years **B.** 15 years
C. 25 years **D.** 35 years
E. 50 years *(AUA 94-19)*

119. A 17-year-old male presents with a grade II left varicocele. Intervention should be based on the results of:
A. Testicular biopsy
B. Semen analysis
C. Ultrasound of the testis
D. LHRH stimulation test
E. Physical examination of the testis *(AUA 94-19)*

114 B 115 B 116 A 117 D 118 D 119 B

120. The Doppler stethoscope is useful in the management of the acute scrotum to:
A. Assess blood flow to the testis
B. Confirm a diagnosis of epididymitis
C. Monitor the outcome of an attempt at detorsion
D. Avoid an unnecessary scrotal exploration
E. Assess blood flow to the scrotal skin *(AUA 94-19)*

121. A painless red genital ulcer with a rolled edge is seen on the penile shaft of a 16-year-old male in the emergency room. The appropriate study that allows for immediate therapy is:
A. Microhemagglutination *Treponema palladium* antibody assay
B. Rapid plasma reagin test
C. HIV
D. Sed rate
E. CBC *(AUA 94-19)*

122. The cause of nonbacterial prostatitis is usually:
A. Unknown **B.** Chemical irritation
C. Ureaplasma **D.** Mycoplasma
E. Chlamydia *(AUA 93-1)*

123. Nonbacterial prostatitis is:
A. Due to low level of zinc
B. Responsive to fluoroquinolones
C. Responsive to prostatic massage
D. Usually psychogenic
E. The most common form of prostatitis syndrome *(AUA 93-1)*

124. Sonographic findings of prostatitis:
A. Are sensitive
B. Often detect prostatic calculi
C. Are specific
D. Are hyperechogenic
E. Are isoechogenic *(AUA 93-1)*

125. The most common infecting organism in chronic bacterial prostatitis is:
A. *Proteus mirabilis* **B.** *Enterococcus faecalis*
C. *Escherechia coli* **D.** *Staphylococcus aureus*
E. *Pseudomonas aeruginosa* *(AUA 93-1)*

126. Acute bacterial prostatitis is:
A. Nearly always accompanied by acute bacterial cystitis
B. Resistant to most antimicrobial therapy

120 A 121 B 122 A 123 E 124 B 125 C 126 A

C. Usually insidious in presentation
D. Associated with prostatic calculi
E. Frequently accompanied by prostatic abscess *(AUA 93-1)*

127. In bacterial prostatitis, prostatic fluid:
A. Become more acidic
B. Become more viscous
C. Contain decreased level of zinc
D. Contain decreased level of spermin *(AUA 93)*

128. Chronic bacterial prostatitis is:
A. Usually asymptomatic
B. The most common form of prostatitis syndrome
C. Always preceded by acute bacterial prostatitis
D. Sometimes due to colonised prostatic calculi
E. Radical transurethral prostatectomy is the most definite treatment *(AUA 93-1)*

129. The pH of prostatic expressate from normal man is:
A. Acidic **B.** Alkaline
C. Isotonic **D.** Very acidic
E. Neutral *(AUA 93)*

130. Pelviperineal pain is:
A. Due to reflux of urine into prostatic ducts
B. Psychogenic in origin
C. Rarely associated with urethritis
D. Sometimes responsive to selective alpha-1 blockers
E. Associated with spasm and narrowing of the external urethral sphincter *(AUA 93-1)*

131. The effectiveness of fluoroquinolones in treating bacterial prostatitis has been described to:
A. High lipid solubility
B. Small molecular size
C. The base structure of the molecule
D. Broad spectrum activity
E. Low protein binding *(AUA 93-1)*

132. Regarding the diagnosis of bacterial prostatitis, all of the following statements are true *except:*
A. Mixed infection involving two or more pathogens are uncommon
B. Gram-positive bacteria except enterococci do not cause relapsing, recurrent urinary tract infection in untreated patients

127 C 128 D 129 B 130 D 131 C 132 A

C. Clinically significant prostatitis is present when prostate fluid contains ten or more white cells per high power field
D. A significant increase of tenfold or more in bacterial count in the prostate specimens when compared with the urethral specimen is considered diagnostic of bacterial prostatitis
E. When carrying out localisation cultures, patients with infection should be treated with nitrofurantoin or penicillin derivatives that will sterilise urine without altering the prostatic microbial flora *(AUA 93-2)*

133. A patient who has acute bacterial prostatitis developed acute urinary retention:
A. He should be treated with indwelling urethral catheterisation
B. He should respond to selective alpha-1 blockers
C. He should be treated with suprapubic aspiration or catheter placement
D. He will get relief from retention by prostatic massage
E. He should be treated with appropriate antimicrobials only *(AUA 93-2)*

134. Which of the following bacteria is a part of the skin flora rather than from the rectum?
A. *E. coli* **B.** *Staphylococcus saprophyticus*
C. *Klebsiella* **D.** *Proteus*
E. *Pseudomonas* *(AUA 93-6)*

135. The oral antibiotic most likely to be effective against a pseudomonas urinary tract infection is:
A. Ciprofloxacin **B.** Amoxicillin
C. Nitrofurantoin **D.** Trimethoprim-sulfamethoxazole
E. Cephalexin *(AUA 93-6)*

136. Bacterial adherence has been best demonstrated with:
A. *E. coli* **B.** *Staphylococcus saprophyticus*
C. *Proteus* **D.** *Klebsiella*
E. *Pseudomonas* *(AUA 93-6)*

137. Which host factor places young women at greatest risk of pyelonephritis?
A. Residual urine of 50 cc
B. Frequent sexual intercourse
C. Chronic use of spermatocides
D. Loss of normal vaginal flora
E. P_1 blood group phenotype *(AUA 93-6)*

133 C 134 B 135 A 136 A 137 E

138. A 21-year-old sexually active female presents with dysuria and frequency. After untreated for two days, she develops gross haematuria, lethargy, and fever at 103°F. Which sign or symptom is most suggestive of pyelonephritis?

A. Dysuria **B.** Frequency
C. Haematuria **D.** Fever
E. Lethargy *(AUA 93-6)*

139. Which antibiotic, or group of antibiotics, is most likely to be ineffective in treating an acute cystitis in a young woman?

A. Trimethoprim-sulfamethoxazole
B. Cephalosporine
C. Fluoroquinolones
D. Nitrofurantoin
E. Ampicillin *(AUA 93-6)*

140. Trimethoprim-sulfamethoxazole is likely to be ineffective against:

A. *Pseudomonas* **B.** *E. coli*
C. *Proteus* **D.** *Klebsiella* *(AUA 93-6)*

141. Which statement about the use of fluoroquinolones is false for treatment of UTI:

A. Indicated for the patient who has multiple allergies or intolerances to other antibiotics
B. First line agent for uncomplicated UTI
C. Useful for recurrent UTIs in men with chronic bacterial prostatitis
D. Oral administration is equally effective to parenteral administration
E. Probably more effective than other antibiotics for complicated UTI *(AUA 93-7)*

142. In clinical trials the fluoroquinolones have been effective in all of the following *except:*

A. Nongonococcal urethritis
B. Syphilis
C. Chlamydial cervicitis
D. Penicillin and tetracycline resistant *Neisseria gonorrhoeae* strains
E. Chancroid *(AUA 93-7)*

143. One of the most important clinical uses of the fluoroquinolones is:

A. First line drug for uncomplicated UTI
B. Treatment of uncomplicated gonorrhoea

138 D 139 E 140 A 141 B 142 B 143 C

C. Cost saving by completing the parenteral antibiotics treatment as an outpatient
D. First line drug for prophylaxis of recurrent UTI
E. Prophylaxis for urologic procedure *(AUA 93-7)*

144. The fluoroquinolones have excellent antimicrobial activity, *in vitro,* against all of the following *except:*
A. *E. coli* **B.** *P. aeruginosa*
C. *Neisseria gonorrhoeae* **D.** *Klebsiella pneumonia*
E. *Enterococcus faecalis* *(AUA 93-7)*

145. The fluoroquinolones have a unique mechanism of action because they:
A. Inhibit the cell wall synthesis
B. Attach to the bacterial 308 ribosome and thereby inhibit the protein synthesis
C. Inhibit the bacterial DNA gyrase which prevents replication of DNA
D. Attach to the bacterial 50S ribsome and thereby inhibit protein synthesis *(AUA 93-7)*

146. Use of a fluoroquinolone is contraindicated for which of the following:
A. Pregnant or nursing females
B. History of seizures
C. Patients with previous severe cephalosporine allergy
D. Presence of hepatic dysfunction
E. Presence of renal dysfunction *(AUA 93-7)*

147. Which of the following statements about the adverse effects of fluoroquinolones is false?
A. A relatively safe toxicity profile
B. May cause certain neurological side effects
C. Temafloxacin exhibits more toxicity than others
D. Gastrointestinal side effects are the most frequently seen
E. More toxicity associated than occurs with cephalosporines *(AUA 93)*

148. Resistance to the fluoroquinolones is being increasingly reported because of:
A. Transfer of plasmids between bacteria
B. Inappropriate widespread usage
C. High prevalence of initially resistant bacteria
D. Cross resistance with other antibiotics
E. Frequent chromosomal mutations *(AUA 93-7)*

144 E 145 C 146 A 147 E 148 B

149. The fluoroquinolones have favourable pharmacokinetic properties which include each of the following *except:*
A. Well-absorbed from gastrointestinal tract
B. Excreted by the kidney and achieving high urinary levels
C. High protein binding
D. Long half-life allowing twice a day administration
E. Lipid solubility resulting in good penetration into certain tissues *(AUA 93-7)*

150. Theophylline levels are increased as a result of inhibition of theophylline metabolism by enoxacin and — when coadministered:
A. Ciprofloxacin **B.** Norfloxacin
C. Ofloxacin **D.** Lomafloxacin *(AUA 93-7)*

151. Which of the following fluoroquinolones appears to be the most effective for infections involving *C. trachomatis, Ureaplasma urealyticum,* and *Mycoplasma hominis*?
A. Enoxacin **B.** Ciprofloxacin
C. Norfloxacin **D.** Ofloxacin
E. Lomafloxacin *(AUA 93-7)*

152. A 50-year-old diabetic man was admitted for management of a 25 per cent TBSA burn four weeks ago and has been managed with a Foley catheter since admission. A single episode of fever to 102°F is noted and urine culture returns positive for *Candida albicans*. The patient is now afebrile. You are consulted and recommend management with:
A. Flucytosine 25 mg/kg IVPB every six hours
B. Placement of a 3-way Foley catheter and begin amphotericin B bladder irrigation
C. Remove Foley catheter and reculture in three days
D. Begin systemic amphotericin B and reculture urine in three days
E. Place a 3-way Foley catheter and begin bladder irrigation and systemic amphotericin B *(AUA 95-4)*

153. The most important predisposing factor to upper urinary tract infection is:
A. Obstruction of urinary flow
B. Vesicoureteral reflux
C. Diabetes mellitus
D. Pregnancy
E. Recurrent urinary tract infection *(AUA 95-26)*

149 C 150 A 151 D 152 C 153 A

154. More than 95 per cent of all recurrent infections in females are ____ of the urinary tract:
A. Chronic infections **B.** Nosocomial infections
C. Unresolved infections **D.** Reinfections *(CU 7 537)*

155. The optimal period of antibiotic therapy (with TMP-SMX, TMP, or a fluoroquinolone) for treating uncomplicated cystitis in women is ____ days, and for men ___ days:
A. 3, 7 **B.** 1, 3
C. 7, 21 **D.** 7, 3 *(CU 7 590)*

156. In Fournier's gangrene, a plain film of the abdomen early may be helpful:
A. In identifying air
B. In detecting calcifications
C. In detecting necrotic areas
D. In detecting the extent of cellulitis *(CU 7 604)*

157. Cryptococcal infection of the prostate requires systemic therapy, and the drug of choice is:
A. Amphotericin B **B.** Flucytosine
C. Itraconazole **D.** Fluconazole *(CU 7 790)*

158. _____ is similar to *candida* species in morphology, growth characteristics, clinical manifestations and response to antifungal therapy:
A. *Aspergillus*
B. Torulopsis glabrata
C. *Cryptococcus neoformans*
D. *Coccidioides immitis* *(CU 7 786)*

159. The classical triad of lassitude, loss of weight and anorexia is _____ seen in early stages of genitourinary tuberculosis:
A. Never **B.** Almost always
C. Rarely **D.** Seldom *(CU 7 818*

160. An appropriate threshold value now a days for defining significant bacteriuria is___ cfu/ml of a known pathogen.
A. 10^5 **B.** 10^2
C. 10^3 **D.** 10^4 *(CU 9 240)*

161. It has no coverage on gram-positive pathogen in UTI.
A. Aztreonam **B.** Amikacin
C. Vanocomycin **D.** Trimethoprim-Sulfamethoxazole
(CU 9 246)

154 D 155 A 156 A 157 D 158 B 159 A 160 A 161 A

162. Red-man's syndrome is an adverse reaction to___.
A. Vancomycin **B.** Aztreonam
C. Nitrofurantoin **D.** Fluoroquinolones *(CU 9 247)*

163. This drug is not nephrotoxic, but renal insufficiency prolongs the serum half-life, requiring adjusted dosing in patients with creatinine clearance of less than 30ml/min.
A. Fluoroquinolones B. Vancomycin
C. Aztroenam D. Cephalosporins *(CU 9 249)*

164. ___ is the most common organism causing endocarditis after urologic procedures.
A. *Enterococcus faecalis* **B.** *Proteus*
C. *E. coli* **D.** *Klebsiella* *(CU9-254)*

165. There is good evidence that the intravenous use of antimicrobial agents, and careful observation of a small renal bascess less than ___ cms, if begun early in the course of the process, may obviate surgical procedures.
A. 3 **B.** 4
C. 5 **D.** 6 *(CU 9 276)*

166. Successful treatment by antibacterial agents alone are unusual in the primary management of___.
A. Perinephric abscess **B.** Renal abscess
C. *Gonorrhoea* **D.** Syphilis *(CU 9 278)*

167. Azotemia or frank renal failure is uncommon in xanthogranulomatous pyelonephritis because ___.
A. Proteus is most commonly involved
B. It is almost always unilateral
C. Kidneys are always minimally enlarged
D. Primary factors are nephrolithiasis. *(CU 9 281)*

168. ___ is characterized by large histiocytes known as Hanse-mann cells, small basophilis, extra or intra-cytoplasmic Michaelis-Gutaman bodies, which are pathognomonic.
A. Xanthogranulomatous pyelonephritis
B. Malcoplakia
C. Renal ecchinococcosis
D. Emphysematous pyelonephritis
Staphyiococcus epidermidis *(CU 9 284)*

169. Funguria may be effectively treated oral agents:
A. Flucytosine 100 to 200 mg/Kg/day in four divided doses for 2 to 3 weeks

162 A 163 A 164 A 165 A 166 A 167 B 168 B 169 D

B. 200 mg fluconazole 1st day, then 100 mg daily for 10 to 14 days
C. Amphotericin B 500 mg and 1 to 1.5 gm over a period of 6 to 12 weeks
D. Both A and B *(CU 9 300)*

170. The most common pattern of inflammation in prostatitis is___infiltrate in the stroma immediately adjacent to prostatic acini.
A. Eosinophilic **B.** Monocytic
C. Lymphocytic **D.** Basophilic *(CU 9 305)*

171. Nonbacterial prostatitis comes under ___ category of NIH classification.
A. II **B.** IIIA
C. IVB **D.** IV
E. V *(CU 9 305)*

172. The presence of____ in uroepithelial cells has been found to be sensitive and specific biomarker for interstitial cystitis.
A. Antiproliferative factor
B. Epidermal growth factor
C. Insulin like growth factor
D. Pro PSA like growth factor *(CU 9 347)*

173. Following oral medications found to be not effective in treatment of interstitial cystitis in randomized controlled studies.
A. Nalmefene and L-arginine
B. Cyclosporine
C. Nifedipine
D. Wuercetin and doxycline
E. Cimetidine and montelukast *(CU 9 360)*

174. Asymptomatic viral shedding can take place for up to ___ months after clinical presentation in genital herpes simplex infection, thereby perpetuating risk of transmission.
A. 1 **B.** 2
C. 3 **D.** 4 *(CU 9 373)*

175. Antiviral therapies approved for genital herpes simplex infection include:
A. Oral famciclovir **B.** Topical valacyclovir
C. Topical acyclovir **D.** All of the above *(CU 9 374)*

176. Sensitivity of screening RPR and VDRL are __% and ___% respectively in primary syphilis and ___ for both in secondary syphilis.

170 C 171 B 172 A 173 A 174 C 175 A 176 A

A. 78,86,100 **B.** 100,86,76
C. 90,80,98 **D.** 87,68,100 *(CU 9 377)*

177. Treatment of choice now for syphilis is:
A. 1 gm ceftriaxone single dose
B. Benzthiazide penicillin G 2 to 4 million units IM as single dose
C. Azithromycin 4 gm single dose
D. Oral doxycline 100 mg BD for 14 days *(CU 9 377)*

178. Chalmydia trachomatis is the most common bacterial STD worldwide. virulent serotypes are:
A. A to K **B.** B to J
C. D to K **D.** D to M *(CU 9 378)*

179. Most highly recommended treatment for uncomplicated gonorrhea is___ .
A. Levofloxacin 250 mg
B. Cefixime 400 mg
C. Ciprofloxacin 500 mg
D. Ceftriaxone 125 mg IM single dose *(CU 9 379)*

180. A single 2 gm dose of metronidazole is effective in most cause of ___ in which "strawberry vulva" or "strawberry cervix" are characteristic.
A. Trichomoniasis
B. *Chlamydia trachomatis*
C. Bacterial vaginosis
D. Lymphogranuloma venereum *(CU 9 380)*

181. Condyloma acuminata caused by HPV types ___ are low-risk for conversion to invasive carcinoma of external genitalia.
A. 16,18,45 **B.** 6,11
C. 16,33,51 **D.** None of above *(CU 9 380)*

182. Over 99% of cervical cancers and 84% of anal cancers are associated with HPV, most commonly:
A. 16,18 **B.** 6,11
C. 32,61 **D.** 39,45 *(CU 9 381)*

183. Recommended treatment of choice for patient-applied therapy of genital warts (condyloma accu-minata):
A. Podofilox 0.5% solution or gel and imiquimod 5% cream
B. Podophyllin resin 20 to 25%
D. CO_2 laser therapy
C. Bichloroacetic acid 80 to 90% *(CU 9 381)*

177 B 178 C 179 D 180 A 181 B 182 A 183 A

184. An alternative to lindane 1% lotion or premethin cream 5% in treating scabies is oral ivermectin, 200 microgram in single dose, repeated 2 weeks later. Itching may persist for ___ after adequate treatment.

A. 6 to 8 weeks **B.** 2 to 3 weeks
C. 1 to 2 weeks **D.** 10 days *(CU 9 383)*

185. Recommended primary therapy of bacterial vaginosis:

A. 2 gm metronidazole single dose.
B. Metronidazole 500 mg BD for 7 days, clindamycin cream 2% intravaginally at bed time for 7 days or metronidazole gel 0.75%
C. Doxycyclin 100 mg BD for 14 days
D. Clindamycin 300 mg BD for one week *(CU 9 384)*

186. Currently the initial recommended therapy for mollicutes, a sexually associated infection:

A. Erythromycin 500 mg 4 times daily for 10 days
B. Ofloxacin 300 mg BD for 10 to 14 days
C. Doxycycline 100 mg BD for 2 weeks
D. C or a single dose of azithromycin, which can be repeated after 10 to 14 days *(CU 9 384)*

187. Lack of male circumcision has been associated with increased risk of STIs and HIV. Statement is:

A. True **B.** False
C. No such study done

188. AIDS represents the end stage of HIV infection. This advanced stage is marked by CD4+ T-cell count of ___ cells/microliter and appearance of constitutional symptoms

A. <400-500 **B.** >5000-7000
C. <200-300 **D.** <100-200 *(CU 9 391)*

189. Patients with median time between infection and development of AIDS of 10 to 11 years in absence of therapy are:

A. Typical progressors **B.** Rapid progressors
C. Slow progressors **D.** Nonprogressors *(CU 9 391)*

190. The most accurate predictor of HIV disease pro-gression:

A. Plasma RNA load
B. Plasma DNA load
C. Blood CD8+ clone load
D. Timing of starting HAART (Highly active anti-retroviral therapy) *(CU 9 392)*

184 B 185 B 186 D 187 A 188 C 189 A 190 A

191. Urinary calculi have been associated with several treatments of HIV infection: The strongest is with protease inhibitors especially__.
A. Indinavir **B.** Valacyclovir
C. Famciclovir **D.** Achclovir *(CU 9 397)*

192. ___ are defined as cells and organs where the HIV can be sheltered or where HAART does not achieve therapeutic concentration. They represent potential source of residual HIV replication.
A. Sanctuaries **B.** Sentinel foci
C. Reservoirs **D.** Kuritzkes *(CU 9 393)*

193. The risk of Kaposi's sarcoma and Non-Hodgkin's lymphoma are increased ___ and 100 fold respec-tively, among HIV infected patients compared with general population.
A. 200 **B.** 500
C. 2000 **D.** 1000 *(CU 9 398)*

194. Compared with HIV noninfected patients, there is greater risk of tumor bilaterality and greater risk of____.
A. Testicular lymphoma **B.** Gonadoblastoma
C. Choriocarcinoma **D.** Seminoma *(CU 9 399)*

195. TB is the most common opportunistic infection in AIDS patients___.
A. In Asia **B.** In Africa
C. Worldwide **D.** In USA *(CU 9 436)*

196. ____ kills both adults and microfilarae in lymphatic disease.
A. Ivermectin **B.** Albendazole
C. DEC **D.** All of above *(CU 9 457)*

197. As regard to prevention of filariasis, ___ has been used as a prophylactic drug given annually.
A. Ivermectin **B.** Albendazole
C. DEC **D.** All of above *(CU9-458)*

198. A single dose of ___ repeated every 2 to 6 weeks until the patient is asymptomatic is successful in onchocerciasis
A. Famclovir **B.** DEC
C. Albendazole **D.** Ivermectin *(CU 9 458)*

199. Radiologic findings may be similar to those of TB – motheaten calyces infundibular stenosis, and renal calcification.
A. Zygomycosis **B.** Blastomycosis
C. Coccidioidomycosis **D.** Onchocerciasis *(CU 9 467)*

191 A 192 A 193 C 194 A 195 C 196 B 197 C 198 D 199 C

200. Herpes zoster cystitis may produce urinary retention and detrusor areflexia days to weeks after the primary viral manifestations. Spontaneous resolution generally occurs in ___.
A. 1 to 2 months **B.** 2 to 3 weeks
C. 1 to 2 weeks **D.** 3 to 4 months *(CU9-2033)*

201. Most candida species are sensitive to which drug with exception to C. kruesi and many strains of C. globrata?
A. Itraconazole **B.** Voriconazole
C. Ketoconazole **D.** Fluconazole *(CU 9 469)*

202. ___ has become the treatment of choice for con-dyloma.
A. 5% acetic acid
B. Topical podophyllin 0.5%
C. Topical trichoroacetic acid
D. Imiquimod cream 5% *(CU 9 962)*

203. In order of least to most reliable for UTI diagnosis: 1. Bagged specimen 2. Midstream void 3. Cathe-terization 4. Suprapubic bladder aspirate.
A. 1,2,3,4 **B.** 4,3,2,1
C. 1,3,2,4 **D.** 2,4,1,3 *(CU 9 3243)*

204. It has been recommended that testing for UTI be part of the evaluation of asymptomatic jaundice that occurs in an infant yonger than 8 weeks, especially with onset after ___ of life.
A. 8 days B. 2 weeks
C. 3 weeks D. 4 weeks

205. Recommnended antimicrobial agent of 1st choice in treating *E. coli* cystitis is _____ for 1 to 3 days.
A. TMP/SMX
B. Fluoroquinolone
C. Doxycycline
D. 2nd generation cephalosporin
E. Gluoroquinolone *(SU 16 208t)*

206. Vesical candidiasis usually responds to alkal-inization of the urine with sodium bicarbonate: a urinary pH of 7.5 is desirable. In the presence of systemic manifestation or candidemia, ____ is the drug of choice.
A. Flucytosine **B.** Nifuratel
C. Amphoteicin B **D.** Ket oconazole *(SU 16 236)*

200 A 201 D 202 D 203 A 204 A 205 A 206 A

9 Benign Prostatic Hyperplasia

1. **On microscopic examination, the hyperplasia of the prostate is characteristically nodular and both epithelial and stromal elements are involved in varying degrees. Which of the following types is most common?**
   A. Stromal
   B. Fibromuscular
   C. Muscular
   D. Fibroadenomatous
   E. Fibromyoadenomatous *(CU 1010)*

2. **In a case of BPH, acute urinary retention is frequently precipitated by:**
   A. Prostatic infarction, ingestion of alcohol, prolonged postponement of voiding
   B. Ingestion of anticholinergics, antidepressant, decongestants
   C. Infection in urine
   D. Ingestion of tranquilizers plus A, B and C *(CU 1018)*

3. **Intravenous urography is indicated in a patient of BPH if he has associated:**
   A. Haematuria
   B. Sensation of incomplete emptying of the bladder
   C. Urinary retention
   D. Nocturnal enuresis *(CU 1020)*

4. **Which of the following is not an obstructive symptom of BPH?**
   A. Nocturia
   B. Hesitancy
   C. Intermittancy
   D. Terminal dribbling *(CU 1018)*

5. **Which of the following is the most frequent and major reason for treating BPH?**
   A. Symptoms that trouble the patient sufficiently enough that he wishes to have something done

1 E 2 D 3 A 4 A 5A

B. Azotemia, hydronephrosis, bladder decompensation with overflow incontinence
C. Acute urinary retention
D. Bladder instability
E. Recurrent urinary tract infection associated with increased residual urine
F. Severe recurrent haematuria *(CU 1021)*

6. ***Not true*** **about transurethral incision of the prostate:**
A. The advantage of this procedure over TURP is that antegrade ejaculation is preserved in most patients
B. This procedure is indicated for the management of bladder outlet obstruction secondary to a small prostate, especially in younger men
C. It is the procedure of choice for a small fibroic prostate
D. In Orandi's original operation two deep incisions at 5 and 7 O'clock positions, extending from the ureteric orifices to the side of the verumontanum, were made *(CU 1022)*

7. Balloon dilatation of the prostate should not be used in patients with:
A. A decompensated bladder
B. Active urinary tract infection
C. A long, large gland
D. A prominent middle lobe
E. All of the above *(CU 1023)*

8. In patients of BPH who are candidates for surgery and who present with severe symptoms of urinary retention:
A. Prazocin, a selective alpha$_1$ adrenergic blocker with fewer side effects should be tried first
B. Definitive surgical treatment is indicated
C. LHRH agonists are preferred as initial therapy
D. 5 alpha-reductase inhibitors may also be of help *(CU 1024)*

9. Which of the following individuals are most likely to have a higher risk of BPH?
A. Asian Americans **B.** African Americans
C. Lean men **D.** Smokers
E. Men with prior vesectomy *(AUA 93-2)*

10. Which of the following individuals are most likely to have a lower risk of BPH?
A. Lean men
B. Smokers

6 C 7 E 8 B 9 C 10 D

C. Men with prior vasectomy
D. African Americans
E. Asian Americans *(AUA 93-2)*

11. The amount of post-void residual urine is:
A. In indication of the risk of infection
B. An indication of impending urinary retention
C. Extremely variable in sequential evaluation of the patient
D. A standard procedure in patient evaluation
E. A guideline procedure in patient evaluation *(AUA 93-29}*

12. Upper tract imaging in BPH patients should be done:
A. In patients with a history of urinary infection
B. In all patients
C. To evaluate residual urine
D. To evaluate prostate size
E. To screen for renal cell carcinoma *(AUA 93-29)*

13. A patient should be excluded from hyperthermia treatment for symptomatic BPH if he has:
A. Had multiple surgeries for haemorrhoides
B. Chronic prostatis
C. Failed a previous hyperthermia treatment
D. An indwelling Foley
E. Failed to improve on alpha-blockers *(AUA 93-36)*

14. The placebo effect in BPH treatment:
A. Is greater for hyperthermia than thermotherapy
B. Is greater for thermotherapy than hyperthermia
C. Can decrease symptoms but not objective para-meters
D. Requires instrumentation to occur
E. Can be statistically significant *(AUA 93-36)*

15. A good candidate for thermotherapy is a patient who has:
A. An intravesical middle lobe
B. Decreased detrusor contractility
C. A prostatic urethra more than 45 mm
D. A symmetric prostate
E. Acute prostatitis *(AUA 93-36)*

16. During transrectal, hyperthermia, the lowest temperature is in the:
A. Peripheral zone **B.** Neurovascular bundle
C. Rectal wall **D.** Prostatic urethra *(AUA 93-35)*

11 C 12 A 13 A 14 E 15 D 16 C

17. A patient's PSA drawn one week after a routine hyperthermia treatment is ten; his pretreatment value was three. This is most likely indicative of:
A. A urinary tract infection
B. Expected prostatic necrosis
C. Applicator treatment trauma
D. Lysis of prostatic carcinoma
E. Postprocedure prostatic remodelling *(AUA 93-36)*

18. Cooling the prostatic urethra during thermotherapy:
A. Decreases post-treatment dysuria
B. Increases treatment time
C. Decreases pain during treatment
D. Increases treatment safety
E. Decreases microwave energy required *(AUA 93-36)*

19. In hyperthermia treatment of BPH, microwaves heat by all of the following mechanisms *except:*
A. Polarisation of molecules
B. Displacement of free charge
C. Vaporisation of water
D. Reorientation of dipoles
E. Increasing kinetic energy *(AUA 93-36)*

20. Which of the following offers little or no better results than does placebo therapy of an obstructing prostate?
A. High intensity focused ultrasound
B. TULIP
C. Interstitial laser treatment
D. Transurethral balloon dilatation of prostate *(CU 7 1492)*

21. Which of the following modality of treatment of BPH has been approved by FDA?
A. Prostatron device
B. TULIP
C. Urolome Wallstent
D. Intraprostatic stent—ASI Titan *(CU 7 1497)*

22. Not an absolute indication for intervention in patients with obstructing prostates:
A. Acute refractory urinary retention
B. Recurrent infection
C. Recurrent hematuria
D. Azotemia
E. Postvoid residual of more than 400 ml *(CU 7 1513)*

17 B 18 C 19 C 20 D 21 A 22 E

23. Efficacy, in terms of improvement with symptom score and peak urinary flow rate is greater with ____ than for any other treatment option available for the obstructing prostate gland:
A. TURP **B.** Open prostatectomy
C. TULIP **D.** HIFU *(CU 7 1544)*

24. Recent work has demonstrated the following types of the alpha-adrenergic receptors in human prostate gland.
1. Alpha$_{1A}$ 2. Alpha $_{1B}$ 3 Alpha $_{1C}$ 4. Alpha $_{1D}$
5. Alpha$_{1E}$
A. 1, 2 and 4 **B.** 1, 2 and 5
C. 1, 4 and 5 **D.** 1, 2 and 3 *(CU 9 2681)*

25. Dutasteride is 5-alpha reductase inhibitor of ____.
A. I **B.** II
C. I and II **D.** I, II, and III *(CU 9 2693)*

26. Regression analysis demonstrated that familial BPH was characterized by large prostate size, with a mean prostate volume of ___ ml in men with hereditary BPH compared with 55.5 ml in men with sporadic BPH.
A. 99.7 ml **B.** 82.7
C. 75.7 **D.** 105.7 *(CU 9 2733)*

27. Alpha ___ is the most abundant adrenoreceptor subtype present in human prostate
A. 1A **B.** 1B
C. 1C **D.** 1D *(CU 9 2737)*

28. ___ coined the tern lower urinary tract symptoms (LUTS) to replace the old inappropriate term prostatism
A. Paul Abrams **B.** Reynard
C. Smith **D.** Campbell *(CU 9 2739)*

29. What is "benign" PSA?
A. When total PSA is <4.0 ng/ml
B. When PSA density is 4 to 10 ng/ml
C. A sub form of PSA that is more strongly related to BPH than total PSA
D. When PSA velocity is <0.75 ng/ml per year *(CU 9 2748)*

30. The most informative natural history study of prostatic symptoms to date is the ___.
A. The medical therapy of prostatic symptoms (MOTS)
B. The proscar long-term efficacy and safety study (PLESS)

23 B 24 A 25 C 26 B 27 A 28 A 29 C 30 C

C. Olmsted County Study of Urinary Symptoms and Health Status among men
D. Longitudinal Population Based Watchful Waiting Study by AUA *(CU 9 2756)*

31. On the basis of TRUS, the growth of the prostate gland in the men 40 to 79 years old was estimated to be about ___ mL per year.
A. 0.6 **B.** 0.3
C. 0.9 **D.** 1.2 *(CU 9 2757)*

32. The Agency of Health Care Policy and Research Guidelines Panel reached the following conclusions regarding uroflowmetry:
1. Flow rate measdurements are inaccurate if the voided volume is <125 to 150 ml.
2. Although Qmax decreases with advancing age and decreasing voided volume, no age or volume correction is currently recommended for clinical practice.
3. Although considerable uncertainty exists, patients with a Qmax > 15 mL/s appear to have somewhat better treatment outcomes after prostatectomy than patients with a Qmax of <15 mL/s
4. A Qmax of less than 15 mL/s does not differentiate between obstruction and bladder decomp-ensation.
5. The peak flow rate (PFR; Qmax) more specifically identifies patients with BPH than does the average flow rate (Qave).

A. All true **B.** Only 4 is true
C. All except 3 true **D.** 2,3, and 4 true *(CU 9 2769)*

33. Studies indicate that post void residual urine (PVR) normally ranges from 0.09 to 2.24 ml, with the mean being 0.53 ml. Seventy percent of normal men have PVRs of <5 ml and 100% have volumes of <___ml.
A. 12 **B.** 22
C. 35 **E.** 60 *(CU 9 2770)*

34. ____ is the most potent available alpha 1 antagonist indicated for the treatment of BPH.
A. Tamsulosin **B.** Alfuzosin
C. Terazosin **D.** Doxazosin *(CU 9 2783)*

35. This is a gonadotropin-releasing hormona antagonist that has been investigated for BPH with primary disadvantage being the requirement for an injection and cost.
A. Flutamide **B.** Dutasteride
C. Finasteride **D.** Zanoterone
E. Atamestane **F.** Cetrorelix *(CU 9 2792)*

31 A 32 C 33 A 34 A 35 F

36. Two types of laser generators are used for interstitial laser therapy of prostate: the Dornier ITT system and Indigo LASEROPTIC system. The former uses ____laser.

A. Nd:YAG **B.** Diode
C. KTP **D.** Holmium : YAG *(CU 9 3823)*

37. Photoselective vaporization of the prostate (PVP) uses ___ laser.

A. Nd:YAG **B.** KTP
C. Diode **D.** Holmiium:YAG *(CU 9 2828)*

38. Open prostatectomy should be considered when the obstructive tissue is estimated to weigh more than ___ grams.

A. 60 **B.** 75
C. 50 **D.** 70 *(CU 9 2846)*

39. One mathematical model suggests a baseline___ benefit-to-risk ratio as defined by the number of cancers prevented for each excess high-grade prostate cancer in those taking Finasteride (Klein et al, 2005) (009-2870)

A. 5:1 **B.** 10:1
C. 3:1 **D.** 7:1

40. Androgen ablation with luteinizing hormone (LHRH) analogs will cause an average ____% volume decrease with androgen deprivation in prostate with and without cancer. The decrease ranges up to 60% in large glands and as little as 10% in small glands.

A. 20 **B.** 30
C. 40 **D.** 50 *(CU 9 2887)*

41. Prostate volume decreases by approximately 21% at ___ months using agents like finasteride.

A. 3 **B.** 6
C. 9 **D.** 12 *(CU 9 2887)*

42. Regardless of initial PSA value, a PSA velocity greater than ___ per year is frequently associated with prostate cancer and warrants biopsy.

A. 0.5 – 0.75 **B.** 0.75 – 1.0
C. 0.25 – 0.5 **D.** 0.01 – 0.25 *(CU 9 2888)*

43. 5 alpha-reductase inhibitors for treatment of BPH have been shown to lower PSA by about ____% after 12 months of treatment.

A. 30 **B.** 40
C. 50 **D.** 60 *(CU 9 2916)*

36 A 37 B 38 B 39 A 40 B 41 B 42 B 43 C

44. The contribution of BPH to overall serum PSA has been estimated to be ___ ng/mL of PSA per of BPH tissue.

A. 0.35 **B.** 0.25
C. 0.15 **D.** 0.6 *(CU 9 2929)*

44 C

10 Tumours of Gastrourinary Tract

1. **At the earliest time of clinical detection, that is 1 cm tumour of 1 gm mass has already completed three-fourth of its life-span and contains approximately — billion cells:**
   A. Nine **B.** Eight
   C. Seven **D.** Six *(CU 1036)*

2. **According to tumour cell growth kinetics a tumour has already completed thirty cell doublings to reach 1 gm (1 cm^2). A further 10 doublings (total of 40) would result in a mass of:**
   A. 6 kg **B.** 7 kg
   C. 5 kg **D.** 1 kg *(CU 1036)*

3. **The technique of 'limiting dilution assay' is used to determine:**
   A. Total tumour cell population
   B. The number of tumour stem cells
   C. The doubling time of a tumour
   D. The effect of therapy on a tumour *(CU 1033)*

4. **A feature common to many malignancies is the formation of new blood vessels, called angiogenesis. In cervical neoplasia, it occurs prior to the gross appearance of the tumour; in breast it occurs coincidentally with tumour development and in melanoma and ovarian carcinoma it occurs after tumour formation. Angiogenesis in urinary bladder neoplasia occurs ____ to the tumour formation:**
   A. Prior **B.** Coincidentally
   C. After *(CU 1044)*

5. **Match the following:**

A. Induction chemotherapy	1. Initial therapy prior to definitive surgery or radiation therapy
B. Salvage chemotherapy	2. Indicates the selection of chemotherapy as the sole therapy

1 A 2 D 3 B 4 B 5 A:2, B:4, C:3, D:1

C. Adjuvant chemotherapy	3. Systemic chemotherapy after treatment of the primary tumour by surgery and/or radiation
D. Neoadjuvant (primary) chemotherapy	4. Is treating the patients who have failed initial attempts with induction chemotherapy

(CU 1046)

6. In most patients the nadir blood counts are noted following chemotherapy, with recovery between day 21 and 28. Hence many chemotherapy regimens employ 21 to 28 day cycle. This nadir blood counts are noted between day:

A. 14 and 18 **B.** 7 and 14
C. 21 and 28 **D.** 1 and 7 *(CU 1047)*

7. The first planned nephrectomy was performed by whom in 1869:

A. Walcott **B.** John Gilmore
C. Gustav Simon **D.** Carson *(CU 1035)*

8. Which are perhaps the most common benign renal mass lesions?

A. Cortical adenoma
B. Renal trysts
C. Renal oncocytoma
D. Renal angiomyolipoma *(CU 1055)*

9. Bell (1950) found a direct correlation between size and malignant potential of renal cortical adenoma, noting that tumours less than that size had little propensity for metastasis:

A. 4 cm **B.** 6 cm
C. 3.5 cm **D.** 3 cm *(CU 1056)*

10. The characteristic central scar can serve to diagnose oncocytoma preoperatively which can be imaged by:

A. MRI **B.** CT scan
C. Ultrasound **D.** All of these *(CU 1056)*

11. Which investigation for oncocytoma reveals a typical 'spoke wheel' or stellate pattern seldom associated with venous pooling or arteriovenous fistula?

A. Angiogram **B.** MRI
C. CT scan **D.** Ultrasound
E. Plain X-ray *(CU 1058)*

6 A 7 C 8 B 9 D 10 D 11 A

12. Majority of patients with the diagnosis of renal hamartoma (angiomyolipoma) have some or all of the other stigmata of tuberous sclerosis (mental retardation, epilepsy, adenoma sebaceum). It is approximately _____ per cent:

A. 70 **B.** 80
C. 90 **D.** 95 *(CU 1058)*

13. Although renal oncocytoma is a benign tumour, radical nephrectomy is still the safest method of therapy unless contraindicated by other factors, e.g. solitary kidney, small size, poor renal function. It is because of what?

A. Unreliability and nonspecificity of current radiographic studies for diagnosis
B. Presence of malignant elements and oncocytoma cells in the same tumour
C. These tumours are typically unifocal
D. All of the above are true
E. Only A and B *(CU 1058)*

14. Which of the following accurately defines the presence of angiomyolipoma in most cases:

A. MRI **B.** CT scan
C. Ultrasound **D.** Angiogram *(CU 1058)*

15. Most of the renal medullary fibromas are adherent to the kidney, often resemble uterine fibroid and have been noted to occur in _____:

A. Women **B.** Men
C. Infants **D.** Eunuch *(CU 1061)*

16. Which of the following are among the rarest of renal tumours:

A. Renal cyst **B.** Oncocytoma
C. Lipoma **D.** Angiomyolipoma *(CU 1061)*

17. Functional renin-secreting juxtaglomerular tumours are _____:

A. Always benign **B.** Always malignant
C. Locally malignant
D. Although benign, has high malignant potential *(CU 1062)*

18. The most consistent chromosomal changes observed in renal cell carcinoma are deletion and translocation involving the short arm of chromosome no _____ :

A. 3 **B.** 6
C. 9 **D.** 11 *(CU 1062)*

12 B 13 E 14 B 15A 16 C 17 A 18 A

19. Which of the following disease is characteristically associated with the presence of multiple and bilateral renal cell carcinoma:
A. Renal hamartoma
B. Exstrophy of the bladder
C. Macrogenitosomia
D. Von Hippel-Lindau disease *(CU 1064)*

20. What is Staufer syndrome:
A. Hypertension in renal cell carcinoma due to seg-mental renal artery occlusion
B. Nonmetastatic hepatic dysfunction in renal cell carcinoma (RCC)
C. Hypercalcaemia occurring in patients with RCC
D. Amyloidosis developing in patients with RCC *(CU 1067)*

21. Choice of investigation for a thorough staging of renal cell carcinoma is ____:
A. CT scan **B.** Ultrasonography
C. MRI **D.** IVU *(CU 1068)*

22. Match the following different histologic type of renal cell carcinoma:

A. Clear cell	1.	Characterised by predominantly spindle pattern, aggressive behaviour and poor prognosis
B. Granular cell	2.	Rounded or polygonal cells with abundant cytoplasm containing cholesterol ester, phospholipid and glycogen
C. Tubulopapillary	3.	Eosinophilic cytoplasm with abundant mitochondria
D. Sarcomatoid	4.	Macroscopically this tumour is small, nearly totally encapsulated and confined to the cortex, microscopically significant anaplasia is uncommon
E. Chromophobe type	5.	Light cytoplasm with finely reticular but not empty appearance; survival is better than clear cell type

(CU 1064)

23. The primary diagnostic test in a patient with sus-pected tumour in the solitary kidney, when parenchymal sparing process is anticipated:

19 D 20 B 21 A 22 A:2, B:3, C:4, D:1, E:5 23 B

A. CT scan **B.** Angiography
C. Ultrasonography **D.** MRI
E. IVU *(CU 1072)*

24. The classic angiographic picture of renal cell carcinoma is/are _____:
A. Neovascularity
B. Arteriovenous fistula
C. Pooling of contrast media
D. Accentuation of capsular vessels
E. A and C
F. A, B and C
G. All of A, B, C, D
H. None of the above *(CU 1072)*

25. Most common sites of metastases from renal cell carcinoma:
A. Liver, lungs, vertebrae, thyroid
B. Lungs, vertebrae, CNS
C. Lungs, liver, subcutaneous tissue, CNS
D. Lungs, liver, subcutaneous tissue and bones *(CU 1073)*

26. Treatment of choice in a patient with renal cell carcinoma in his solitary kidney:
A. Partial nephrectomy
B. Radical nephrectomy and renal transplant
C. Excision of the tumour
D. Enucleation of the tumour
E. Primary radiotherapy *(CU 1076)*

27. Treatment of preference in bilateral renal tumours:
A. Primary radiotherapy
B. Primary chemotherapy
C. Excision of the tumour
D. Partial nephrectomy *(CU 1076 CMC)*

28. Most commonly employed chemotherapeutic agent for treating metastatic renal cell carcinoma is ___:
A. Methotrexate **B.** Vinblastine
C. 6-mercaptopurine **D.** Interferon *(CU 1079)*

29. Removal of the primary tumour in the patient with metastases for purpose of either prolonging survival or causing regression of metastatic lesion is known as ____:
A. Adjunctive nephrectomy
B. Palliative nephrectomy
C. Neoadjunctive nephrectomy
D. None of A, B, and C *(CU 1083)*

24 G 25 C 26 C 27 C 28 B 29 A

30. Kidney stem cells are derived from:
- **A.** Proximal tubular cells
- **B.** Distal tubular cells
- **C.** Cells of collecting ducts
- **D.** Cells of ascending loop of Henle *(CU 1032)*

31. Which is *not true* regarding 'mitotic index':
- **A.** It is the number of mitoses as a per cent of the cells counted
- **B.** It is a reliable direct proportional indication of proliferation rate
- **C.** Usually, the time cells spend in mitosis is 1 to 2 hours
- **D.** Agents such as colchicine arrest both metaphase and telophase *(CU 1035)*

32. Aneuploidy is associated with a higher proliferation rate and it does always correlate with survival. This statement is:
- **A.** True **B.** False
- **C.** Interminable *(CU 1036)*

33. *False* about sarcomas of the kidney:
- **A.** The most common presenting signs and symptoms are pain, a flank mass, and haematuria
- **B.** Angiographically these tumours are hypervascular with arteriovenous fistulae
- **C.** The findings of tumour originating from renal sinus or capsule or presence of a mass with fat or bone would highly suggest renal sarcoma
- **D.** Absence of retroperitoneal lymphadenopathy in a patient with large renal tumour is also more compatible with sarcoma than carcinoma *(CU 1084)*

34. The most common variety of sarcoma of the kidney:
- **A.** Fibroxanthosarcoma **B.** Fibrosarcoma
- **C.** Carcinosarcoma **D.** Leiomyosarcoma
- **E.** Liposarcoma *(CU 1084)*

35. Haemangiopericytomas of the kidney:
- **A.** Are renin secreting tumours of the kidney
- **B.** They produce severe hypertension
- **C.** They are usually small and benign
- **D.** A, B, and C *(CU 1085)*

36. *False* statement regarding the epidemiology of urothelial tumours:
- **A.** The bladder is the most common site of cancer in the urinary tract

30 A 31 D 32 B 33 B 34 D 35 D 36 B

B. Blacks have significantly higher five-year survival rates than whites
C. Since 1950s, the incidence of bladder cancer has steadily increased
D. In men, it is the fourth most common cancer after prostate, lung, and colorectal cancers *(CU 1095)*

37. Patients treated with cyclophosphamide have an up to ninefold increased risk of developing bladder cancer; cigarette smokers have a _____ higher incidence of bladder cancer than nonsmokers:
A. Threefold **B.** Fourfold
C. Fivefold **D.** Sixfold *(CU 1096)*

38. The urothelium of the normal bladder is a transitional cell epithelium ____ layers thick:
A. 3 to 7 **B.** 7 to 11
C. 2 to 3 **D.** 6 to 9 *(CU 1098)*

39. "Bacteruric bumps" are seen in:
A. Cystitis cystica **B.** Von Brunn's nests
C. Cystitis follicularis **D.** Cystitis glandularis *(CU 1099)*

40. In patients with superficial bladder cancer, the presence of atypia in adjacent urothelium is associated with ____ per cent risk of developing invasive disease:
A. 10 to 15 **B.** 15 to 20
C. 25 to 30 **D.** 35 to 40 *(CU 1098)*

41. The glandular type of inverted papilloma is considered to be potentially a preneoplastic lesion; most commonly, it occurs in ____ area in men with prostatism:
A. Trigone
B. Bladder neck
C. Dome of the bladder
D. Trigone and bladder neck
E. Lateral walls of the bladder *(CU 1100)*

42. Nephrogenic adenoma is more common in ____ and is often associated with symptoms of dysuria and urinary frequency:
A. Men **B.** Women
C. Infants **D.** Children *(CU 1100)*

43. Vesical leukoplakia may progress to _____ cell carcinoma in up to 20 per cent of patients:
A. Transitional **B.** Squamous
C. Adenoid *(CU 1101)*

37 B 38 A 39 C 40 D 41 D 42 A 43 B

44. ***Not true*** **about pseudosarcoma of urinary bladder:**
- **A.** They are postoperative spindle cell nodules
- **B.** Usually they are confused with leiomyosarcoma of the bladder
- **C.** They are reactive proliferation of spindle cells occurring several months after a lower urinary tract procedure or infection
- **D.** Although the name is pseudosarcoma, they are potentially malignant *(CU 1101)*

45. Carcinoma *in situ* of the urinary bladder consists of poorly-differentiated transitional cell carcinoma confined to the urothelium: urine cytopathology study results are positive in _____ per cent of patients:

A. 100 **B.** 90 to 100
C. 80 to 90 **D.** 70 to 80 *(CU 1102)*

46. Which of the following statements about carcinoma *in situ* of the urinary bladder are true?
1. **Occurs more commonly in men**
2. **It protends a poor prognosis**
3. **The most effective intravesical therapy is BCG**
4. **Patients with marked urinary symptoms generally have a longer interval preceding the development of invasive cancer**
5. **These patients have higher tumour recurrence rate**

A. 1, 2, 3, 4, and 5 **B.** 1, 2, 3, and 5
C. 1, 2, 4, and 5 **D.** 1, 2, 3, and 4 *(CU)*

47. About 70 per cent of bladder tumours are:

A. Papillary **B.** Nodular
C. Mixed **D.** Sessile infiltrating *(CU 1105)*

48. There is a significant correlation between tumour grade and prognosis; the correlation between tumour stage and prognosis is even stronger; a papilloma comes under grade:

A. Grade 3 **B.** Grade 2
C. Grade 1 **D.** Grade 0 *(CU 1106)*

49. Squamous cell carcinoma of the urinary bladder is common in all of the following conditions *except:*
- **A.** Bilharzial bladder
- **B.** Intestinal urinary conduits
- **C.** Bladder diverticula
- **D.** Chronic irritation from urinary calculi *(CU 1107)*

44 D 45 C 46 B 47 A 48 D 49 B

50. Active or recurrent cancers in the urethra has been reported in about _____ of patients with squamous cell carcinoma of the urinary bladder, suggesting that urethrectomy should be performed routinely in these patients:

A. Half **B.** One-third
C. One-fourth **D.** One-fifth *(CU 1108)*

51. Which carcinoma characteristically produce linitis plastica of the bladder?

A. Squamous cell carcinoma
B. Transitional cell carcinoma
C. Primary vesical adenocarcinoma
D. Metastatic adenocarcinoma *(CU 1108)*

52. Urachal carcinoma arise outside the bladder and histologically may be adenocarcinomas, transitional cell carcinoma, squamous cell carcinomas, or rarely sarcomas. Which is the most common histologic type?

A. Adenocarcinoma
B. Squamous cell carcinoma
C. Transitional cell carcinoma
D. Sarcoma *(CU 1109)*

53. Local invasion of bladder cancer can occur by three mechanisms. The most common is:

A. En bloc spread **B.** Tentacular invasion
C. Lateral spread *(CU 1110)*

54. Implantation of bladder cancer into wound scars can be prevented by giving approximately ____ CGy preoperative radiation, which should be given before the performance of partial cystectomy or cystotomy for interstitial radiotherapy:

A. 1000 **B.** 2000
C. 3000 **D.** 450

55. In the natural history, nearly all patients with metastatic bladder cancer succumb within:

A. 1 year **B.** 2 years
C. 6 months **D.** 3 months *(CU 1111)*

56. Which is not a true statement about Thomson-Friedenreich (T) antigen?

A. T-antigen expression has been reported to correlate with muscle-invasive bladder cancer and is associated with a poor prognosis

50 A 51 C 52 A 53 A 54 A 55 B 56 C

B. It has also been reported to be predictive of the response to the treatment with BCG and inter-leukin-2
C. It is expressed in association with ABH blood group antigens
D. T-antigen is naturally expressed in an unmasked form on bladder cancer cells *(CU 1112)*

57. Paraneoplastic syndromes are seldom associated with bladder cancer:
A. True **B.** False *(CU 1112)*

58. The most common presenting symptom of bladder cancer is:
A. Frequency **B.** Dysuria
C. Urgency **D.** Painless haematuria *(CU 1113)*

59. Flow cytometry is especially accurate in patients with:
A. Carcinoma *in situ* **B.** Squamous cell carcinoma
C. Adenocarcinoma **D.** Carcinosarcoma *(CU 1114)*

60. Resections of tumours on _____ should be performed with the patient under general anaesthesia with simultaneous intravenous administration of pancuronium to adequately paralyse the patient:
A. Bladder diverticular
B. Lateral bladder wall
C. Trigone
D. Dome of the bladder
E. Bladder neck *(CU 1116)*

61. The best method to accurately assess the depth of penetration of bladder cancer:
A. CT scan
B. MRI
C. Ultrasonography
D. Contrast enhanced CT scan *(CU 1116)*

62. There is direct correlation between size of a pulmonary lesion and the likelihood of its being a metastasis. Most calcified lesions that are ___ or larger are metastases:
A. 2 cm **B.** 1 cm
C. 0.5 cm **D.** 3 cm *(CU 1118)*

63. According to the Jewett-Strong-Marshall staging system for bladder cancer, carcinoma *in situ* is:
A. Stage 0 **B.** Stage A
C. Stage B1 **D.** Stage B2 *(CU 1119)*

57 B 58 D 59 A 60 B 61 D 62 B 63 A

64. Stage D1 (Jewett-Strong-Marshall) of bladder cancer is:
A. Invasion of contiguous organ
B. Invasion of perivesical fat
C. Deep muscle invasion
D. Juxtaregional lymph node metastasis *(CU 1119)*

65. The traditional follow-up programme recommended for patients with superficial bladder cancer includes serial cystoscopies every _____ months for two years, then every six months for two years, and then yearly:
A. One **B.** Two
C. Three **D.** Four *(CU 1119)*

66. Approximately 2 to 5 per cent of patients with bladder cancer subsequently develop upper tract tumours: the mean interval is approximately:
A. 70 months **B.** 2 years
C. 36 months **D.** 4 years *(CU 1119)*

67. Triethylenethiophosphoramide (thiotepa), etoglucid (epodyl), mitomycin-C and doxorubicin (adriamycin) are all used as intravesical adjuvant therapy in superficial bladder cancer; which of them has got the highest transurothelial absorption?
A. Thiotepa **B.** Doxorubicin
C. Mitomycin **D.** Epodyl *(CU 1120-1121)*

68. Systemic chemotherapy with cyclophosphamide, methotrexate, and cisplatin is effective against carcinoma *in situ* of urinary bladder:
A. True **B.** False *(CU 1121)*

69. The vitamins, pyridoxine, vitamin C, and vitamin A analogues have been given for prophylaxis against bladder cancer recurrences. Which of the following has also been reported to be effective in the prevention of bladder cancer?
A. Tryptophan **B.** Selenium
C. Zinc **D.** Silver *(CU 1122 CMC)*

70. It is prudent to wait about _____ weeks following tumour resection in bladder cancer before starting BCG therapy:
A. 2 **B.** 3
C. 4 **D.** 6 *(CU 1122)*

71. Which is the most common side effect of intravesical BCG therapy?
A. Frequency **B.** Haematuria
C. Fever **D.** Malaise
E. Arthralgia *(CU 1123)*

64 A 65 C 66 A 67 A 68 B 69 B 70 A 71 A

72. A patient with carcinoma *in situ* is having fever persisting more than 48 hours following intravesical BCG therapy and not responding to antipyretics:
- **A.** Predisolone 40 mg daily should be given
- **B.** Should be treated with isoniazid, 300 mg per day + Pyridoxine, 50 mg/day
- **C.** Should be managed with tepid sponging only
- **D.** Should be treated with pyrazinamid *(CU 1123)*

73. Which of the following statements about intravesical BCG therapy is *not true*?
- **A.** BCG should not be given to immunocompromised patients
- **B.** BCG should not be given to patients after traumatic catheterization
- **C.** BCG should not be given to patients with vesicoureteral reflux
- **D.** Intravesical BCG in conjunction with transurethral resection of the prostate may be effective in the treatment of patients with carcinoma *in situ* involving the prostatic urethral mucosa *(CU 1123)*

74. The most effective local therapy for patients with invasive bladder cancer (stages B, C) is:
- **A.** Radiotherapy
- **B.** Chemotherapy
- **C.** Combination of A and B
- **D.** Radical cystectomy *(CU 1124)*

75. Currently, four different types of urinary diversions are used after radical cystectomy. One of them can be done only in men:
- **A.** Continent cutaneous diversions, such as Kock or Indiana pouch
- **B.** Continent orthotopic reservoirs to the urethra with ileal or ileocecal pouches
- **C.** Augmented rectal reservoirs
- **D.** Ileal conduit *(CU 1125 JIPMER)*

76. Transurethral resection of invasive bladder cancer:
- **A.** Has got no place in current policy of management
- **B.** Is equally effective if followed by intravesical BCG therapy
- **C.** Should probably be reserved for patients who have small, low-grade tumours with only superficial muscle invasion and patients who are not medically fit for cystectomy
- **D.** Is not superior to Nd:YAG laser therapy *(CU 1125}*

72 B 73 C 74 D 75 B 76 C

77. Which is not a chemical radiosensitiser?
A. Misonidazole **B.** Cisplatin
C. 5-fluorouracil **D.** Adriamycin *(CU 1126)*

78. Preoperative radiation therapy has been recommended for the patients with:
A. Carcinoma *in situ*
B. Stage B and C transitional cell carcinoma of bladder
C. Invasive squamous cell carcinoma of the bladder
D. Invasive adenocarcinoma of the bladder *(CU 1128)*

79. In women, the standard operation for invasive carcinoma of the urinary bladder is an anterior pelvic extenteration with wide excision of the bladder and urethra in continuity with the uterus, fallopian tubes, ovaries, and anterior wall of the vagina; the urethra should be removed routinely because _____ per cent of women have cancer involving the urethra:
A. 26 **B.** 36
C. 46 **D.** 56 *(CU 1130)*

80. Is it possible to preserve potency in patients undergoing total urethrectomy?
A. Yes **B.** No *(CU 1130)*

81. In urinary diversion by ureterosigmoidostomy, colonic neoplasia occurred at the site of anastomosis in nearly ____ per cent of patients:
A. 10 **B.** 5
C. 15 **D.** 20 *(CU 1130)*

82. In the management of stage D2 carcinoma of the bladder, which four-drug combination is believed to be the most effective:
A. Mercaptopurine, vincristine, azacitidine, cytarabine
B. Methotrexate, vinblastine, adriamycin, cisplatin
C. Mithramycin, vinblastine, allopurinol, carmustine
D. Mitomycin, cyclophosphamide, cisplatin, doxorubicin
(CU 1131)

83. Which of the following statements is *not true*?
A. A 2 per cent alum solution is effective in treating haemorrhage from radiation cystitis
B. 1 to 10 per cent formalin solution has been given in bladder instillation to control haemorrhage from advanced bladder tumour or radiation cystitis
C. Formalin solution is exceedingly irritating to the bladder, and thus requires general or regional anaesthesia
D. Danger of possible seizures from aluminium toxicity has been reported in patients with diminished renal function, from alum solution *(CU 1133)*

77 D 78 C 79 B 80 A 81 A 82 B 83 A

84. All of the following are nonepithelial bladder tumours *except:*
A. Neurofibroma **B.** Small cell carcinoma
C. Pheochromocytoma **D.** Primary lymphoma *(CU 1135)*

85. Which of the following is *not true* of pheochromo-cytoma of the urinary bladder:
A. Total cystectomy is the treatment of choice
B. They arise from the paraganglionic cells within the bladder wall, usually in the region of the trigone
C. Malignancy is determined more by the clinical behaviour than the histologic features of the tumour
D. About 10 per cent of these tumours are malignant and have the capacity to metastasize *(CU 1135)*

86. The preferred treatment for localised primary bladder lymphomas:
A. Radical cystectomy **B.** Partial cystectomy
C. Radiation therapy **D.** Chemotherapy *(CU 1136)*

87. Renal pelvis tumours account for approximately 5 to 10 per cent of all renal tumours and about _____ per cent of all urothelial tumours:
A. 5 **B.** 10
C. 15 **D.** 20 *(CU 1137)*

88. _____ nephropathy associated transitional cell carcinoma is more commonly bilateral (10 per cent) and behaves in a more indolent form than the sporadic form of the disease:
A. Balkan **B.** Analgesic
C. Reflux **D.** Tropical *(CU 1137)*

89. The finding of ___ is pathognomonic of analgesic abuse:
A. Glomerulosclerosis **B.** Capillarosclerosis
C. Nephrosclerosis **D.** Tubulorsclerosis *(CU 1138)*

90. Long term exposure to analgesics induces a nephropathy that is associated with up to 70 per cent incidence of upper urinary tract transitional cell carcinoma: which is probably the most important aetiologic agent:
A. Aspirin **B.** Sulindac
C. Phenacetin **D.** Ibuprofen *(CU 1138)*

91. Bilateral involvement (synchronous or metachronous) occur in ____ per cent of sporadic upper urinary tract transitional cell carcinomas:
A. 1 to 3 **B.** 3 to 6
C. 6 to 9 **D.** 2 to 5 *(CU 1138 CMC)*

84 B 85 A 86 C 87 A 88 A 89 B 90 C 91 D

92. Ureteral tumours are most commonly located in the:
A. Upper ureter **B.** Midureter
C. Lower ureter **D.** Upper half of ureter *(CU 1138)*

93. Squamous cell carcinoma of the renal pelvis and ureter are nearly always associated with:
A. Infected staghorn calculi of long duration
B. Prolonged indwelling urethral catheterisation
C. Bilharziasis
D. Balkan nephropathy
E. Chronic ureteral obstruction *(CU 1139)*

94. The most common presenting symptom of upper urinary tract urothelial tumours is:
A. Flank pain
B. Gross haematuria
C. They are mostly asymptomatic
D. Frequency and dysuria *(CU 1140)*

95. Which of the following is *not true* about imaging studies done for the diagnosis of upper urinary tract urothelial tumours?
A. Contrast material should be diluted by 1/3rd to 1/2 to avoid obscuring subtle filling defects on retrograde urography
B. Because hypo-osmotic contrast material may alter the cellular detail and make cytological studies more difficult to interpret, ionic contrast material are preferable
C. Antegrade pyelography is not advisable in patients suspected of having upper tract transitional cell carcinoma because of the risk of seeding tumour cells along the needle tract
D. MRI has not been reported to offer any material advantage over CT scanning in the diagnosis and staging of these tumours *(CU 1140-1142)*

96. Upper urinary tract urothelial tumours invading into the smooth muscle of the ureter, renal pelvis, or renal parenchyma are called stage:
A. I **B.** II
C. III **D.** IV *(CU 1144)*

97. Match the following:

A. Most renal pelvis-tumors	1. Segmental resection if they are solitary and low grade tumou's
B. Distal ureteral tumours	2. Total nephroureterectomy

92 C 93 A 94 B 95 B 96 C 97 A:2, B:3, C:2, D:4, E:5

C. Upper and mid-ureteral tumours	3. Distal ureterectomy and ureteroneocystostomy
D. Multifocal or high grade upper and midureteral tumours	4. Nephroureterectomy
E. Bilateral diffuse tumours	5. Bilateral nephrectomy with hemodialysis
	6. Chemotherapy/radiotherapy

98. Prostate cancer is very uncommon before the age of 50 years; almost all cancers that arise in the prostate are _____ of the ductacinar secretory epithelium:

A. Squamous cell carcinoma
B. Transitional cell carcinoma
C. Adenocarcinoma
D. Fibrosarcoma *(CU 1159)*

99. A two to three fold increase in risk has been reported for men having a father or brother with clinical carcinoma of the prostate; it is:

A. True **B.** False *(CU 1160)*

100. In the biologic behaviour of prostate cancer, the tumour doubling time has been estimated to be as long as:

A. 2 years **B.** 1 year
C. 3 years **D.** 9 months *(CU 1161)*

101. Transitional cell carcinoma in the prostate in the majority of cases is found in patients who also have bladder and/or urethral cancer. Which of them is usually manifested clinically?

A. Cancer prostate **B.** Bladder cancer
C. Urethral cancer *(CU 1162)*

102. The cells of which zone of the prostate secrete pepsinogen II and tissue plasminogen activator, which are not found elsewhere in the prostate:

A. Central zone **B.** Peripheral zone
C. Transition zone *(CU 1167)*

103. More than half of all cancers arise in the peripheral zone, which is normally the largest region and the one most accessible to rectal palpation of cancer. This zone is seldom more than _____ cm in thickness measured from the capsule surface:

A. 1 cm **B.** 1.5 cm
C. 2 cm **D.** 2.5 cm *(CU 1168)*

98 C 99 A 100 A 101 B 102 A 103 B

104. A variable nuclear spacing, inconstant distance of nuclei from the cell base, and partial loss of polarity; it is dysplasia of grade:
A. I **B.** II
C. III **D.** IV *(CU 1169)*

105. Roughly, 80 per cent of the cancers of the prostate that are clinically detected are larger than:
A. 3 ml **B.** 2.5 ml
C. 2 ml **D.** 1 ml *(CU 1171)*

106. Based purely on architectural criteria, which grading system for cancer prostate is in most general use?
A. Gleason **B.** McNeal
C. Lowsley **D.** Scardino *(CU 1174 BHU)*

107. Comedocarcinoma of the prostate gland is a visually distinct variant of Gleason grade ___ carcinoma:
A. 1 **B.** 2
C. 3 **D.** 4
E. 5 *(CU 1175)*

108. The boundary between the peripheral zone and transition zone appears to represent a partial barrier to invasion for most cancers. Hence, transition zone cancers are usually detected incidentally at TUR for BPH and are seldom palpable rectally until larger than _____ in volume:
A. 2 ml **B.** 3 ml
C. 4 ml **D.** 5 ml *(CU 1178)*

109. Both frequency and extent of penetration of the prostate cancer through prostate capsule increase rapidly above 4 ml, and almost all cancers greater than _____ in volume show extensive invasion:
A. 6 ml **B.** 8 ml
C. 10 ml **D.** 12 ml *(CU 1180)*

110. The seminal vesicles are first invaded medially by cancer prostate, because:
A. The invasion of the seminal vesicles almost always results from direct spread of the tumour into the ejaculatory duct wall inside the prostate
B. There is facilitated spread of the tumour along conduits provided by the perineural spaces
C. The medial portion of the seminal vesicles and prostate are from same embryological origin

104 A 105 D 106 A 107 E 108 C 109 D 110 A

D. The capsule of the prostate is weak near the junction of the medial portion of the seminal vesicle and prostate base *(CU 1181)*

111. According to the Organ System Coordinating Center (OSCC) classification for clinical staging of prostate cancer, organ confined digitally palpable cancer is of:
A. Stage TA1 **B.** Stage TA2
C. Stage TB **D.** Stage TBC *(CU 1183)*

112. A digitally unrecognisable prostate cancer, detected by PSA, confirmed by biopsy is which stage according to OSCC:
A. TA1 **B.** TA2
C. TAX **D.** TB *(CU 1183)*

113. The first and only organ specific cancer marker with the possible exception of thyroglobulin is:
A. Prostate-specific antigen
B. Tissue polypeptide antigen
C. Neuron-specific enolase
D. Prostatic acid phosphatase *(CU 1186)*

114. The PSA level rises at an overall average rate of ____ per gram of intracapsular cancer regardless of extracapsular penetration:
A. 1.5 ng/ml **B.** 4.5 ng/ml
C. 3.5 ng/ml **D.** 2.5 ng/ml *(CU 1187)*

115. Although the PSA level is of most use in estimating the tumour burden in patients with untreated prostate cancer, it is also helpful in monitoring patients after:
A. Radical prostatectomy
B. Radiation therapy
C. Hormonal therapy
D. All of the above *(CU 1190)*

116. Any PSA collected within _____ weeks of prostate biopsy or TURP should not be used to estimate tumour burden or pathologic stage:
A. 2 **B.** 4
C. 3 **D.** 6 *(CU 1192)*

117. Because the rise in serum PSA levels after prostatic examination is minimal compared with biopsy or TURP, ____ week(s) is sufficient for any elevation secondary to digital rectal examination for PSA to return to baseline levels:
A. 4 **B.** 3
C. 2 **D.** 1 *(CU 1192)*

111 C 112 C 113 A 114 C 115 D 116 B 117 D

118. The proportion of the PSA-alpha 1-antichymo-trypsin complex is ___ in patients with prostate cancer than in those with BPH:
A. Higher **B.** Lower
C. Equal **D.** Not related *(CU 1193)*

119. In general, the Yang polyclonal assay of PSA gives values 1.4 to 1.9 times ____ than the Hybritech monoclonal assay:
A. Lower **B.** Higher *(CU 1192)*

120. Match the following columns:

A. Men who present with acute urinary retention from BPH	1. One should immediately proceed to TRUS and biopsy
B. For men with normal DRE and a PSA level equal to or less than 4 ng/ml	2. Tend to have higher PSA levels than those who present electively
C. For men with PSA level greater than 10 ng/ml	3. One should proceed no further
D. TRUS like DRE	4. With rare exceptions, cannot detect cancer in the BPH zone

(CU 1194-1197)

121. Six systematic biopsies of the prostate offer additional information as to:
A. Extent (volume) of the cancer
B. Estimate the overall Gleason grade of the whole tumour
C. Location of the cancer at the apex or bladder neck, which may be helpful in avoiding positive surgical margins
D. It represents the only technique currently available to detect isoechoic cancers, which are said to represent as many as 21 per cent of palpable stage B cancers
E. All of the above
F. All of the above except D *(CU 1197)*

122. Aspiration biopsies of the prostate:
A. Has the disadvantage of yielding no volumetric information
B. Most pathologist believe that the Gleason grading system and its architectural classification cannot be utilised in cytologic grading
C. Are more painful than biopsy taken by biopsy instrument
D. All of the above are true
E. All of the above are true except C *(CU 1198)*

118A 119 B 120 A:2, B:3, C:1, D:4 121 E 122 D

123. Place of bone scans in prostate cancer:

A. Any radical prostatectomy candidate with a Hybritech serum PSA level less than or equal to 20 ng/ml essentially has no chance of demonstrating bone metastases

B. It has been shown that, in postradical prostatectomy patients, there is no need to obtain a bone scan as long as PSA remains undetectable

C. Both A and B are true

D. Only B is true *(CU 1199)*

124. It has been concluded that prostate cancers of volume 0.5 ml or greater are appropriate for therapy, and those less than 0.5 ml need not be treated. This statement is:

A. True **B.** False

C. Currently inappropriate *(CU 1200)*

125. It is well known that nearly _____ per cent of stage TA and stage TB patients of prostate cancer will have at least microscopic metastases to the pelvic lymph nodes:

A. 10 **B.** 20

C. 30 **D.** 40 *(CU 1201)*

126. A single microscopic metastatic focus of prostate cancer in _____ of multiple pelvic lymph nodes is a hallmark that it is incurable by any currently available modality of treatment:

A. Two **B.** Only one

C. Three **D.** Four *(CU 1201)*

127. Which of the following is indicative of treatment failure in prostate cancer?

A. Presence of positive biopsy findings 18 months or more after irradiation therapy

B. A rising or elevated PSA level 1 year or longer after radiotherapy

C. Presence of positive biopsies 3 years after radiotherapy

D. Both A and B *(CU 1203)*

128. Salvage prostatectomy after radiation failure may be considered if:

A. A patient has a life expectancy of 10 to 15 years at the time radiation failure is detected

B. The seminal vesicles are negative for cancer as determined by TRUS-guided biopsy

C. The serum levels of PSA are not too elevated and bone scans are negative

123 C 124 A 125 C 126 B 127 D 128 D

D. All of the above
E. All of the above except A *(CU 1203)*

129. Erectile impotency occurs in ____ per cent of patients after radical prostatectomy:
A. 100 **B.** 90
C. 50 **D.** 75 *(CU 1212)*

130. The gold standard for hormonal therapy in stage D cancer prostate is:
A. Bilateral orchiectomy **B.** Diethylstilbesterol
C. Antiandrogens **D.** Combination therapy *(CU 1212)*

131. Which of the following causes an initial testosterone release, termed the flare period, followed by a fall in testosterone to castrate levels?
A. Bilateral orchiectomy **B.** LHRH agonists
C. Antiandrogens **D.** Diethylstilbesterol *(CU 1212)*

132. The initial 'flare' from the temporary release of testosterone by LHRH agonists can cause bone pain in the first week of therapy for stage D prostate cancer. One of the following statements regarding it is *true:*
A. LHRH agonists should be the drugs of choice in any patient with metastatic cancer particularly in whom neurologic symptoms are there
B. This flare can be avoided by one day therapy with ketoconazole
C. The flare reaction can be greatly blunted by starting diethylstilbesterol along with LHRH agonists
D. LHRH therapy can never be equivalent to bilateral orchiectomy *(CU 1212)*

133. About one-third of patients respond to flutamide after failure of medical or surgical castration in treating stage D prostate cancer, whereas almost no one responds to castration after failure of ____ as initial monotherapy:
A. Leuprolide **B.** Flutamide
C. Diethylstilbesterol **D.** Prazocin *(CU 1213)*

134. Ketoconazole impairs the production of androgen by inhibiting the enzymes of gonadal and adrenal corticosteroid synthesis: castrate levels of androgens occur in _____ hours of a 400 mg oral dose:

129 B 130 A 131 B 132 B 133 B 134 A

A. 4 to 8 **B.** 1 to 2
C. 2 to 3 **D.** 12 to 24 *(CU 1213)*

135. Local radiation therapy is most useful for pain control in terminal stage of prostate cancer. In general, 5000 rads are given for hip or long bone pain, 3000 rads for chest pain (ribs), and _____ rads for vertebral pain or impending collapse of a vertebra:
A. 4000 **B.** 5000
C. 6000 **D.** 2000 *(CU 1214)*

136. The appendix testis, which is found in 90 per cent of autopsy cases, is a remnant of:
A. Mesonephric duct **B.** Wolffian duct
C. Müllerian duct **D.** Genital ridge *(CU 1122)*

137. There is a known tendency for a patient to develop contralateral germinal tumour of testis in approximately ___ per cent of cases:
A. 4 **B.** 3
C. 1 **D.** 2 *(CU 1224)*

138. The average annual rate (age adjusted) of germ cell neoplasm of the testis is highest in:
A. United States and Great Britain
B. Africa and Asia
C. China and Russia
D. Scandinavia, Switzerland, Germany and New Zealand
(CU 1225)

139. The peak incidence of seminoma is between the ages of:
A. 30 to 35 years **B.** 35 to 39 years
C. 40 to 45 years **D.** 45 to 56 years *(CU 1225 BHU)*

140. Malignant testicular lymphomas are predominantly tumours of:
A. Men over 50 years of age
B. Children below 10 years of age
C. Young adults
D. Men over 70 years of age *(CU 1225)*

141. Approximately 2 to 3 per cent of testicular tumours are bilateral: the most common histologic type occurring bilaterally is:
A. Nonseminoma
B. Seminoma
C. Leyding cell tumours
D. Gonadoblastoma *(CU 1225)*

135 A 136 C 137 C 138 D 139 B 140 A 141 B

142. Acute pain is the presenting symptom of germ cell neoplasm of testis in approximately ____ per cent of patients:
A. 5 **B.** 10
C. 15 **D.** 20 *(CU 1228)*

143. Distant spread of testicular cancer occurs most commonly to the:
A. Pulmonary region **B.** Liver
C. Ribs **D.** Brain *(CU 1230)*

144. The metabolic half-life of alpha-fetoprotein (AFP) in humans is _____ days, a fact that is useful in evaluating treatment response:
A. 8-10 **B.** 12-15
C. 5-7 **D.** 2-5 *(CU 1232)*

145. AFP may be produced by all of the following tumours *except:*
A. Pure seminoma
B. Pure choriocarcinoma
C. Yolk sac tumour
D. Pure embryonal carcinoma
E. Teratocarcinoma *(CU 1232)*

146. The serum half-life of hCG is between ___, but the individual subunits are cleared much more rapidly (20 minutes for alpha subunit and 45 minutes for the beta subunit):
A. 5 to 7 days **B.** 36 and 72 hours
C. 15 and 30 days **D.** 24 and 36 hours *(CU 1232)*

147. Which form of therapy is most widely-accepted form of treatment for seminomas following inguinal orchiectomy?
A. Radiotherapy **B.** Chemotherapy
C. Combined therapy **D.** Nodal clearance *(CU 1234)*

148. Which of the following is the most common subtype of pure seminoma?
A. Spermatocytic **B.** Typical or classic
C. Anaplastic *(CU 1236)*

149. Characteristic features of anaplastic seminoma include all, *except:*
A. A greater mitotic activity
B. A higher rate of local invasion
C. A higher rate of metastatic spread
D. A lower rate of tumour marker production (beta-hCG)
(CU 1236)

150. Analysis and treatment results indicate that inguinal orchiectomy plus radiation therapy is ____ effective in controlling anaplastic and/than classic seminoma:

142 B 143 A 144 C 145 A,B 146 D 147 A 148 B 149 D 150 A

A. Equally **B.** More
C. Less *(CU 1237)*

151. The nuclei contains characteristic filamentous chromatin in:
A. Typical seminoma
B. Anaplastic seminoma
C. Gonadoblastoma
D. Supermatocytic seminoma *(CU 1237)*

152. According to the Boden/Gibb staging system for testicular tumours, disseminated disease above the diaphragm, or visceral disease is:
A. Stage I **B.** Stage II
C. Stage III **D.** Stage IV *(CU 1230)*

153. In stage I and stage II (low volume) seminoma, the inferior portion of the irradiation field should include the contralateral inguinal region in which of the following clinical situation?
A. In patients with retained spermatic cord remnant
B. In patients with histories of herniorrhaphy or prior orchiopexy
C. In homosexuals with previous attacks of chancroid
D. In patients with active lymphogranuloma venereum
(CU 1237)

154. Patients with stage 1 seminoma treated with postorchiectomy radiation have 5 year survival rates approximating:
A. 100 per cent **B.** 90 per cent
C. 80 per cent **D.** 95 per cent *(CU 1237)*

155. The overall disease free survival rates in patients with stage IIB seminoma treated with abdominal irradiation to approximately:
A. 50 per cent **B.** 60 per cent
C. 45 per cent **D.** 65 per cent *(CU 1238)*

156. Which of the following combinations have often found to be effective against disseminated testicular seminomas as well as nonseminomatous tumours?
A. Cisplatinum, vinblastine, bleomycin
B. Cyclophosphamide, vincristine, bleomycin
C. Cyclophosphamide, cisplatinum, cytarabine
D. Cisplatinum, adriamycin, carmustine *(CU 1238)*

157. In cases of disseminated seminomas, response rate seem to be somewhat better when ____ based chemotherapy is given as the primary treatment with no prior radiation:

151 D 152 C 153 B 154 D 155 A 156 A 157 B

A. Bleomycin **B.** Cisplatin
C. Vinblastine **D.** Cyclophosphamide *(CU 1238)*

158. The most common testis tumour in infants and children:
A. Yolk sac tumour **B.** Teratoma
C. Choriocarcinoma **D.** Embryonal carcinoma *(CU 1240)*

159. Embryoid bodies are found in:
A. Embryonal carcinoma **B.** Teratoma
C. Seminoma **D.** Yolk sac tumour *(CU 1240)*

160. Approximately _____ per cent of patients are reportedly subfertile at the time of diagnosis of a nonseminomatous germ cell tumour:
A. 70 to 80 **B.** 65 to 70
C. 50 to 60 **D.** 40 to 50 *(CU 1241)*

161. Modified retroperitoneal lymph node dissection: the similar dissection is performed with the exception of the right lateral margin, that it is only carried to the lateral margin of the inferior vena cava rather than all the way to the right ureter in which sided testicular tumour?
A. Right **B.** Left *(CU 1242)*

162. The tumouricidal dose of radiation therapy for nonseminomatous germ cell testicular tumours ranges between _____ far in excess of that required to sterilize seminoma:
A. 4000 and 5000 cGy **B.** 6000 and 7000 cGy
C. 2000 and 3000 cGy **D.** 8000 and 9000 cGy *(CU 1243)*

163. In the surgical treatment of stage II nonseminomatous germ cell testicular tumour a complete bilateral lymphadenectomy is indicated when:
A. The tumour markers are positive following orchiectomy
B. Suspicious looking lymph nodes are encountered at laparotomy
C. Serum markers, CT scan and laparotomy findings are collectively negative
D. There is doubt that it may be stage III tumour *(CU 1245)*

164. The following agent has single-agent activity in patients with testicular cancer:
A. Cisplatinum **B.** Bleomycin
C. Vinblastine **D.** Etoposide *(CU 1247)*

165. The most common site of origin of extragonadal germ cell tumour is:

158 A 159 D 160 C 161 B 162 A 163 A,B 164 D 165 A

A. Mediastinum
B. Retroperitoneum
C. Pineal gland
D. Sacrococcygeal region *(CU 1249 BHU)*

166. Extragonadal germ cell tumours predominantly affect males, although a female predominance has been noted with:
A. Mediastinal region
B. Sacrococcygeal region
C. Retroperitoneal region
D. Pineal gland region *(CU 1249)*

167. Approximately ____ per cent of interstitial cell tumours, the most common of the sex-cord mesenchyme tumours, are malignant:
A. 10 **B.** 5
C. 15 **D.** 20 *(CU 1250)*

168. Statement A: The prognosis for Leydig cell tumours is good because of their generally benign nature:Statement B: The persistence of virilizing and feminising features following orchiectomy is an indication of malignancy
A. Both A and B are true
B. A is true and B is false
C. Both are false

169. The most common testicular tumour in dogs is:
A. Sertoli cell tumour **B.** Seminoma
C. Choriocarcinoma **D.** Leydig cell tumour *(CU 1251)*

170. Approximately ___ of patients with gonadoblastomas are phenotypic females, usually presenting with primary amenorrhea and sometimes with lower abdominal masses:
A. One-fourth **B.** Four-fifth
C. Three-fourth **D.** One third *(CU 1252)*

171. Radical orchiectomy is the first step in therapy, and high incidence of bilaterality (50%) argues for contralateral gonadectomy when ____ is present:
A. Seminoma
B. Sertoli cell tumour
C. Leydig cell tumour
D. Gonadoblastoma *(CU 1253)*

172. The usual presentation of malignant mesothelioma of testis is with:

166 B 167 A 168 B 169 A 170 B 171 D 172 B

A. Pain **B.** Hydrocele
C. Epididymoorchitis **D.** Haematemesis *(CU 1253)*

173. The most frequent presentation with primary testicular carcinoid is:
A. Pain
B. Rapid testicular enlargement
C. Hydrocele
D. Slow, progressive, painless, enlargement of testis *(CU 1253)*

174. The most common secondary neoplasms of testis and most common of all testis tumours in patient over 50 years of age:
A. Lymphoma
B. Adenocarcinoma
C. Malignant mesothelioma
D. Metastatic tumours *(CU 1254)*

175. Which of the following organs appears to be a prime initial site of relapse in male children with acute lymphocytic leukemia?
A. Kidneys **B.** Ureters
C. Testis **D.** Epididymis *(CU 1255)*

176. According to the Rappaport classification, most of the testicular lymphoma are:
A. Histiocytic **B.** Lymphocytic
C. Undifferentiated **D.** Burkitt's lymphoma *(CU 1254)*

177. The common primary sites/sources of metastatic tumours of the testis in decreasing order of frequency are:
A. Melanoma, kidney, prostate, lung, gastrointestinal tract
B. Prostate, lung, gastrointestinal tract, melanoma, kidney
C. Lung, prostate, kidney, gastrointestinal tract, melanoma
D. Kidney, prostate, lung, melanoma, gastrointestinal tract
(CU 1255)

178. The most common tumours of the paratesticular tissues:
A. Mesothelioma **B.** Cystadenoma
C. Adenomatoid tumours *(CU 1256)*

179. The most common malignant spermatic cord tumour is:
A. Rhabdomyosarcoma **B.** Liposarcoma
C. Fibrosarcoma **D.** Leiomyosarcoma *(CU 1257)*

180. Cutaneous nevi occurring on the skin of the penis need not be distinguished from malignant melanoma by biopsy:
A. True **B.** False *(CU 1264)*

173 D 174 A 175 C 176 A 177 B 178 C 179 A 180 B

181. It is not a premalignant cutaneous lesion of the penis:
A. Giant condyloma acuminatum
B. Balanitis xerotica obliterans
C. Cutaneous horns
D. Leukoplakia *(CU 1265-1268)*

182. Given are a group of different symptoms: which of them is due to balanitis xerotica obliterans?
1. Local pain 2. Discharge
3. Pruritus 4. Painful erections
5. Urinary obstruction 6. Local penile discomfort
A. All except 5
B. All except 4 and 5
C. All of them *(CU 1265)*

183. The classic finding of koilocyte on histologic analysis is pathognomonic for:
A. Leukoplakia
B. Condyloma acuminata
C. Bowenoid papulosis
D. Balanitis xerotica obliterans *(CU 1266)*

184. This is not employed for treating condyloma acuminata:
A. 5-fluorouracil
B. 0.5 per cent podophyllotoxin
C. Ethanolamine oleate
D. Interferon
E. Nd:YAG laser

185. All of the following statements regarding bowenoid papulosis are true *except:*
A. Histologically these lesions meet all the criteria for carcinoma *in situ*
B. DNA sequences closely related to HPV 16 have been found in them
C. To date, progression to an invasive lesion has not been reported
D. 5- fluorouracil cream do not cure these lesions
(CU 1267-1268)

186. Kaposi's sarcoma involves the penis more in the ___ male population than in other patients with AIDS:
A. Homosexual **B.** Heterosexual
C. IV drug abusers **D.** Haemophilic *(CU 1208)*

187. Buschke-Lowenstein tumour is:

181 A 182 C 183 B 184 C 185 D 186 A 187 A

A. Verrucous carcinoma
B. Erythroplasia of Queyrat
C. Bowen's disease
D. Bowenoid papulosis *(CU 1268)*

188. Metastasis from which tumours is extremely rare:
A. Carcinoma *in situ*
B. Verrucous carcinoma of nonpenile sites
C. Bowenoid papulosis
D. Verrucous carcinoma of penis *(CU 1269)*

189. The Buschke-Lowenstein tumour differs from condyloma acuminatum in that:
A. The later, no matter how large, remains superficial, sparing adjacent tissue
B. The etiology of the former is seldom viral
C. 5-fluorouracil cream local application is the treatment of choice in the former
D. The later is grossly indistinguishable from squamous cell carcinoma *(CU 1269)*

190. When Bowen's disease occurs on the penis, it is called:
A. Bowenoid papulosis
B. Erythroplasia of Queyrat
C. Paget's disease
D. Carcinoma *in situ* *(CU 1269)*

191. Invasive carcinoma of the penis is most commonly diagnosed during which decades of life:
A. 4th and 5th
B. 5th to 6th
C. 6th to 7th
D. 7th to 8th *(CU 120 BHU)*

192. Carcinoma of the penis is almost unknown in _____ population, among whom neonatal circumcision is customary:
A. Pakistani **B.** Japanese
C. Paraguay **D.** Jewish *(CU 1270)*

193. In which country, carcinoma of the penis is the most common genitourinary malignancy?
A. Paraguay **B.** United States
C. India **D.** Norway *(CU 1271)*

194. No consistent aetiologic relationship of penile carcinoma has been found to all of the following *except:*

188 D 189 A 190 B 191 C 192 D 193 A 194 D

A. Syphilis
B. Chancroid
C. Granuloma inguinale
D. Sexually transmitted HPV *(CU 1271)*

195. Metastatic enlargement of the regional lymph nodes in carcinoma of the penis eventually leads to chronic infection, skin necrosis, and death from all of the following *except:*
A. Inanition **B.** Sepsis
C. Haemorrhage **D.** Renal failure *(CU 1272 JIPMER)*

196. Which is *not true* about carcinoma of the penis:
A. The strongest prognostic indicator for survival is the tumour grade
B. No harmful effects regarding tumour dissemination secondary to biopsy are recognised
C. The majority of the tumours are squamous cell carcinoma
D. Most malignancies are of moderate grade *(CU 1274)*

197. The Jackson staging system of penile carcinoma is a:
A. Clinicopathologic one
B. Clinical one
C. Pathologic one *(CU 1276)*

198. According to TNM classification of penile carcinoma, tumour invading urethra or prostate is:
A. Tl **B.** T2
C. T3 **D.** T4 *(CU 1277)*

199. In a 61-year-old patient, carcinoma of the penile shaft has involved the epidermis only:
A. A total penectomy is ideal
B. A partial penectomy is the choice
C. Primary radiotherapy is very effective and will give good cosmetic result
D. Removal of the skin and subcutaneous tissue may be adequate *(CU 1277)*

200. 'Chemosurgery' with reference to penile carcinoma is:
A. Mohs micrographic surgery
B. Microsurgery after 12-hour application of local 5-fluorouracil
C. Surgery followed immediately by local 5-fluorouracil
D. Doing amputation of penis during the course of chemotherapy *(CU 1278)*

195 D 196 D 197 B 198 C 199 D 200 A

201. Should inguinal lymphadenectomy be bilateral rather than unilateral for patients presenting with unilateral adenopathy at initial presentation of penile carcinoma?

A. No **B.** Never
C. Yes **D.** This issue is controversial *(CU 1286)*

202. Which is considered to be as the procedure of choice for free flap reconstruction of the penis after partial penectomy?

A. Upper lateral arm flap
B. Radial forearm flap
C. Superficial groin flap
D. Gracilis myocutaneous flap *(CU 1290)*

203. The most frequent sign of penile metastases is:

A. Priapism **B.** Penile swelling
C. Nodularity **D.** Ulceration *(CU 1292)*

204. In sampling the radical prostatectomy specimen, the most frequent site of an isolated positive margin is:

A. Posterolateral **B.** Lateral
C. Posterior **D.** Distal urethral margin
E. Proximal urethral margin *(AUA 94-7)*

205. In the previously untreated patient of prostate cancer with acute ureteral obstruction, the best treatment strategy is:

A. Ileal conduit
B. Androgen deprivation
C. Radiation therapy
D. Bilateral ureteral stents
E. Bilateral nephrostomies *(AUA 94-8)*

206. In metastatic prostatic cancer, spinal cord compression producing serious neurological deficits occurs most commonly at levels:

A. C1-C6 **B.** T1-T6
C. T7-T12 **D.** Below L4 *(AUA 94-8)*

207. The optimal radiologic procedure for evaluation of spinal cord compression is:

A. Bone scan **B.** CT scan
C. Myelogram **D.** MRI
E. PET scan *(AUA 94-8)*

208. Appropriate emergency treatment for spinal cord compression due to metastases from cancer prostate includes all of the following *except:*

201 C 202 B 203 A 204 D 205 B 206 B 207 D 208 A

A. Lupron
B. Decadron 100 mg IV
C. Ketocomazole 400 mg po Q 8 h
D. Orchiectomy
E. Radiation therapy

209. Effective and safe therapy for hot flushes after orhiectomy for metastatic prostate cancer includes:
A. Flutamide
B. Clonidine
C. LHRH-agonist plus flutamide
D. DES 5 mg/day
E. Low dose oral testosterone replacement *(AUA 94-8)*

210. A 68-year-old potent male with known advanced cancer of the prostate has rapid development of obstructive voiding symptoms with occasional incontinence. He desires transurethral resection of the prostate and refuses hormonal therapy. To assess his urinary functional prognosis with TURP, which of the following procedures is most important to accomplish preoperatively?
A. Bone scan and plain film radiographs of the LS spine
B. Urodynamic evaluation with urethral pressure profile
C. Prostate specific antigen and prostate acid phosphatase
D. Cystoscopy
E. Alkaline phosphatase and LDH *(AUA 94-8)*

211. A 77-year-old male with metastatic carcinoma of the prostate and in urinary retention undergoes bilateral simple orchiectomy. One week following surgery, the catheter is removed but the patient is unable to void. Optimal therapy at this point is:
A. Transurethral resection of the prostate
B. Flutamide 250 mg po q8h
C. Replace catheter—schedule another voiding trial in one to two weeks
D. Ketoconazole 400 mg po q8h
E. External beam radiotherapy to the prostate *(AUA 94-1)*

212. In spinal cord compression due to metastatic prostate cancer, immediate surgical decompression is recommended for all of the following *except:*
A. Unstable spine
B. Prior radiation therapy
C. Poor response to radiotherapy
D. Slow onset paraparesis
E. Rapid onset of spinal cord compression *(AUA 94-8)*

209 B 210 D 211 A 212 D

213. A more favourable prognosis has been suggested for patients with prostate cancer that is:
A. DNA tetraploid **B.** DNA aneuploid
C. DNA diploid **D.** Palpable
E. Isoechoic *(AUA 93-10)*

214. Pharmacologic agents currently used to effectively treat cancer pain:
A. Include NSAIDs, narcotics and antidepressants
B. Include antipsychotic agents alone
C. Initially include high dose, potent narcotics
D. Include anxiolytics alone
E. Should be used with a high index of suspicion for addiction *(AUA 93-10)*

215. *Correct* statements concerning neuroanatomy of urologic structures are:
A. The superior and inferior hypogastric plexus form from the aortic plexus
B. The parasympathetic system ascends from the inferior hypogastric plexus and travels via the pelvic splancnic nerves
C. The nerve supply of the perineum arises from branches of the pudendal, ilioinguinal, and genitofemoral nerves
D. The inferior hemorrhoidal, perineal, and dorsal nerves of the penis (clitoris) are branches of the pudendal nerves
E. All of the above *(AUA 93-9)*

216. Serum prostatic specific antigen (PSA) has proven most useful for:
A. Monitoring disease progression in patients with stage A_2 prostate cancer
B. Monitoring disease progression in patients following radical prostatectomy
C. Preoperative staging of patients with prostate cancer
D. Screening patients with prostate cancer
E. Monitoring patients with metastatic prostate cancer *(AUA 93-10)*

217. After routine pathologic examination of prostate chips following TURP for presumed benign disease, the percentage of patients to have occult prostate cancer is approximately:
A. 5 **B.** 10
C. 15 **D.** 20
E. 25 *(AUA 93-10)*

218. Normal preoperative PSA levels in patients undergoing radical prostatectomy for prostate cancer has been associated with:

213 C 214 A 215 E 216 B 217 B 218 A

A. DNA diploid tumours
B. DNA aneuploid tumours
C. A poor prognosis
D. DNA tetraploid tumours
E. Early disease recurrence *(AUA 93-10)*

219. Transurethral resection of the prostate resects primarily the:
A. Periurethral glands
B. Fibromuscular stroma
C. Transition zone
D. Peripheral zone
E. Central zone *(AUA 93-10)*

220. The majority of patients with stage Al prostate cancer can be expected to:
A. Die of prostate cancer
B. Suffer disease progression at ten years
C. Develop metastatic disease
D. Die of unrelated cause
E. Have an elevated prostatic acid phosphatase *(AUA 93-11)*

221. In the tumour, nodes, metastasis (TNM) system, a patient with clinical stage C carcinoma of the prostate would include stage(s):
A. T3 and T4 **B.** T2a
C. T1b and T2a **D.** T2 and T3
E. T2 *(AUA 93-11)*

222. Your 60-year-old patient with carcinoma of the prostate invading both seminal vesicles has opted for external beam radiotherapy. He is curious about potential side effects and complications, most notably genitourinary and gastrointestinal. You tell him that his chance of major (grade 3 or higher) GU or GI complication is about:
A. 1 and 1 per cent respectively
B. 2 and 3 per cent respectively
C. 8 and 3 per cent respectively
D. 7 and 8 per cent respectively
E. About 5 per cent for both *(AUA 93-11)*

223. The characteristic most important for determining the biologic behaviour of prostate cancer is:
A. Tumour grade **B.** Tumour volume
C. Local clinical stage **D.** Serum PSA
E. PSA density *(AUA 93-33)*

224. Which of the following statements is *false*:

219 C 220 D 221 A 222 C 223 B 224 D

A. There is an age-related increase in prostatic volume
B. There is an age-related increase in PSA density
C. The age-related increase in serum PSA is directly proportional to the age-related increase in prostatic volume
D. The ratio of prostatic epithelium to the stroma may vary, resulting in variation in serum PSA concentration for prostate glands of similar size
E. PSA velocity provides improved specificity over serum PSA *(AUA 93-33)*

225. Digital rectal examination:
A. Can detect prostate cancer in patients with a normal serum PSA
B. Has a higher prostate cancer detection rate than PSA
C. Is an objective means of evaluating the prostate for malignancy
D. Primarily detects prostate cancer in an organ-confined stage
E. Has a detection rate of 2.2 to 2.6 per cent in a screening population *(AUA 93-33)*

226. Transrectal ultrasonography:
A. Has sufficient sensitivity and specificity to qualify as a screening test for cancer prostate
B. Is quick, objective, and cost-effective test for cancer prostate
C. Has a cancer prostate detection rate of approximately 1.7 per cent
D. Adds significantly to prostate cancer detection when DRE and serum PSA both are normal
E. Is best used in conjunction with sextant biopsy in patients with a normal PSA and/or DRE *(AUA 93-33)*

227. For patients interested in early prostate cancer detection, all of the following men should begin annual prostate evaluation *except:*
A. A 58-year-old black male with no family history of prostate cancer
B. A 52-year-old white male with no previous vasectomy and no family history of prostate cancer
C. A 42-year-old white male with one brother diagnosed with prostate cancer
D. A 46-year-old white male with no previous vasectomy and no family history of prostate cancer
E. A 52-year-old white male who had a normal PSA and DRE one year ago *(AUA 93-34)*

225 A 226 E 227 D

228. A 50-year-old male presents with frequency and urgency. Urine culture grows 100,000 *E. coli*. Serum PSA is 18 ng/ml. Prostate examination reveals no induration. You should:

A. Treat with appropriate antibiotics and repeat the DRE, examination of the prostatic secretions, and PSA in a month
B. Biopsy the prostate with antibiotic coverage
C. Biopsy the prostate when UTI resolves
D. Treat the UTI and re-evaluate in a year
E. Follow with yearly DREs *(AUA 93-34)*

229. After radiation therapy for prostate cancer, PSA decreases by 50 per cent every:

A. Two to three days **B.** Six to ten days
C. Two to three weeks **D.** Six to ten weeks
E. Six to ten months *(AUA 93-34)*

230. All of the following appear to reflect prognosis in patients receiving radiotherapy for prostate cancer *except:*

A. Pretreatment PSA
B. Post-treatment PSA
C. Nadir PSA level
D. Initial rate of PSA decrease
E. Rise of PSA after nadir *(AUA 93-34)*

231. Which of the following is not associated with elevation of serum PSA?

A. Acute prostatitis **B.** Chronic prostatitis
C. BPH **D.** Prostatic intraepithelial neoplasia
E. Prostate needle biopsy *(AUA 93-34)*

232. What PSA level in a man with clinically localised prostate cancer suggests a decreased likelihood that a preoperative bone scan will be negative?

A. More than 4.0 ng/ml
B. Less than 10.0 ng/ml
C. Less than 4.0 ng/ml
D. More than 10.0 ng/ml
E. Less than 20.0 ng/ml *(AUA 95-1)*

233. After radical prostatectomy, how much time should one wait before measurement of serum PSA levels?

A. One month **B.** Two months
C. Three months **D.** Six weeks
E. One week *(AUA 95-1)*

228 C 229 D 230 D 231 B 232 B 233 A

234. What per cent of men will experience a significant decrease in serum PSA levels 12 months after radiation therapy for clinically localised prostate cancer?
A. 100 per cent **B.** 80 per cent
C. 60 per cent **D.** 50 per cent
E. 30 per cent *(AUA 95-1)*

235. Cachexia in the cancer patient can be associated with each of the following *except:*
A. Eating the wrong foods
B. Tumour activity
C. Depression
D. Dysphagia
E. Chemotherapy *(AUA 95-3)*

236. Which of the following is not necessary for photo-dynamic action to occur within tissue?
A. Presence of oxygen
B. Light absorption
C. Extensive tumour vascularity
D. Retention of sensitizing agent within target tissue
E. Appropriate wavelength for tissue penetration
(AUA 95-12)

237. Despite early observations therapy of photosensitization, few clinical applications of photodynamic were attempted before the mid-1970s because:
A. Few clinicians were interested in the application of light for treatment of neoplasia
B. Photosensitizing agents were not available for clinical use
C. Light delivery system were not practical for clinical use
D. Side effects from treatment were unacceptable
E. Fluorescence interfered with light absorption *(AUA 95-12)*

238. Which of the following side effects encountered during photo-dynamic therapy is the most common?
A. Eye sensitivity
B. Skin photosensitivity
C. Bladder contracture or vesicoureteral reflux
D. Liver toxicity
E. Allergic reactions to the photosensitizer administration
(AUA 95-12)

239. Dermal photosensitivity following administration of Photofrin II:
A. Can be successfully blocked by most sunscreens
B. Usually requires three or four weeks to return to normal sun exposure

234 B 235 A 236 C 237 C 238 B 239 C

C. May be enhanced after treatment with adriamycin
D. Indomethacin reliably blocks photosensitivity
E. Is an unusual occurrence *(AUA 95-12)*

240. Other potential urological application of photodynamic therapy include all of the following *except:*
A. Treatment of bilateral renal cell carcinoma
B. Treatment of human papilloma virus
C. Topical application of photosensitizer for photodynamic therapy of superficial bladder carcinoma
D. Treatment of residual small volume prostatic carcinoma
E. Evaluation of metastatic deposits *(AUA 95-12)*

241. Abdominal radiotherapy for testis cancer:
A. Results in permanent azoospermia
B. Does not affect FSH level
C. Does not affect spermatogenesis
D. Is incompatible with future paternity
E. Does not result in greater chance of congenital malformation in an offspring *(AUA 95-19)*

242. Nerve sparing RPLND:
A. Yields ejaculatory rate of 50 to 90 per cent
B. Sacrifices efficacy in order to decrease morbidity
C. Preserves any pre-existing fertility potential
D. Is not appropriate because of the surveillance scheme of management
E. Has been associated with impotence *(AUA 95-19)*

243. After chemotherapy for testis cancer:
A. FSH is unchanged
B. LH is unchanged
C. Sperm counts decrease, but recover to normal in less than 6 months
D. 27 per cent are azoospermic approximately five years after treatment
E. Postchemotherapy surgery is unnecessary *(AUA 95-19)*

244. Cryptorchidism:
A. Is associated with a higher chance of fathering a child with congenital anomalies
B. Is associated with a higher chance of developing testis cancer
C. Is associated with 'poor risk' testis cancer
D. Is associated with infertility
E. Both B and D *(AUA 95-19)*

240 A 241 E 242 C 243 D 244 E

245. The most common site for ectopic pheochromocytoma is:
A. Infrarenal organ of Zuckerkandl
B. Suprarenal gland
C. Filum terminale
D. Celiac plexus *(CU 7 234)*

246. A characteristic pain suggesting the diagnosis of retroperitoneal fibrosis occurs as often as 90 per cent of the time, according to Utz and Henry:
A. True **B.** False *(CU 7 405)*

247. This disease is found almost exclusively in males in the third to sixth decade of life:
A. Pelvic lipomatosis
B. Retroperitoneal lymphocele
C. Primary retroperitoneal hematoma
D. Hematoma of the rectus abdominis *(CU 7 417)*

248. Immunocompromised patients are more likely to develop cancer than age matched control subjects in the general population. Among the tumours that occurred in a large series were Kaposi's sarcoma, lymphomas, skin cancers, renal tumours, carcinoma of the cervix, and carcinoma of the vulva and perineum. Which of them occurred in 39 per cent of cases, and the rest others in a range of 4 to 12 per cent?
A. Renal tumours **B.** Lymphomas
C. Kaposi's sarcoma **D.** Skin cancers *(CU 7 528)*

249. The most common malignancy noted in dysgenetic testis is ____:
A. Seminoma **B.** Teratoma
C. Gonadoblastoma **D.** Squamous cell carcinoma
(CU 7 2156)

250. Which of the following histologic type of Wilms' tumour characteristically metastasizes to bone?
A. Anaplastic
B. Rhabdoid tumour
C. Clear cell sarcoma of the kidney
D. Rhabdomyosarcoma tumour *(CU 7 2215)*

251. Which of the following types of Wilms' tumour continues to be the most lethal?
A. Rhabdoid tumour
B. Clear cell sarcoma of the kidney
C. Rhabdomyosarcoma tumour
D. Anaplastic *(CU 7 2213)*

245 A 246 A 247 A 248 D 249 C 250 C 251 A

252. Cytogenetically, renal papillary neoplasms show a unique pattern, regardless of size, including loss of the ____ chromosome along with a trisomy of chromosome 7 and 17:
A. X chromosome
B. Y chromosome
C. Both X and Y chromosome *(CU 7 2297)*

253. This gene is the most frequently altered gene in human cancers:
A. p53 **B.** p16
C. p21 **D.** p15 *(CU 7 2333)*

254. Best survival results in squamous cell carcinoma of the urinary bladder have been achieved with:
A. Radical cystectomy with or without planned preoperative radiotherapy
B. Radical cystectomy with planned postoperative radiotherapy
C. Aggressive intravesical chemotherapy
D. Only megadose radiotherapy *(CU 7 2343)*

255. Treatment of _____ is by local excision, which is virtually always curative:
A. Melanoma of glans penis
B. Basal cell carcinoma of penis
C. Paget's disease of penis
D. Squamous cell carcinoma of penis *(CU 7 2478)*

256. The most frequent sign of penile metastasis is:
A. Penile swelling **B.** Penile nodularity
C. Priapism **D.** Ulceration *(CU 7 2479)*

257. The single test with the highest positive predictive value for cancer prostate:
A. Prostate-specific acid phosphatase (PSAP)
B. Prostate-specific antigen (PSA)
C. Prostate-specific membrane antigen (PSMA)
D. Prostatic acid phosphatase (PAP) *(CU 7 2521)*

258. Which is a *wrong* statement?
A. Neutron therapy are being conducted in prostate cancer taking advantage of the ability of the neutrons to have an enhanced killing effect on hypoxic cells and a reduced variation in biologic effect across the cell cycle
B. Spinal cord compression in a patient with bony metastases from prostate cancer is a medical emergency
C. The gold standard for diagnosing spinal cord compression has traditionally been the myelogram. The MRI is of similar if not

252 B 253 A 254 A 255 B 256 C 257 B 258 D

superior accuracy with an added advantage of being able to image the entire spine

D. Once the diagnosis of cord compression is made or even suspected, all patients should be placed on external beam radiotherapy *(CU 2609-2613)*

259. All of the following are used as systemic radionuclide therapy in cancer prostate *except:*

A. ^{125}I **B.** Strontium 89
C. Phosphorus 32 **D.** Samarium 153
E. Rhenium 186 *(CU 7 2608-2614)*

260. Adrenal carcinomas are often indistinguishable from adenomas except for the large size (more than 6 cms). CT scanning may underestimate the size of the adrenal lesion, and it has been suggested that exploration be performed when the lesion is more than ____ on CT or MRI:

A. 5 cm **B.** 4 cm
C. 35 mm **D.** 45 mm *(CU 7 2929-2932)*

261. Which is by far the most consistent sign in pheochromocytoma?

A. Tremor **B.** Hypertension
C. Hyperhydrosis **D.** Pallor of upper part of body *(CU 7 2948)*

262. Which of the following is not a *true* statement?

A. About 10 per cent of pheochromocytomas are found in normotensive patients

B. In contrast to adults, children manifest a higher incidence of familial pheochromocytomas (10%) and bilaterality (24%)

C. Because of the severe consequences of the undiagnosed pheochromocytoma, it is recommended that all hypertensive patients be screened

D. A characteristically bright, "light bulb" image is seen on ultrasound of patients with pheochromocytoma *(CU 7 2949-2956)*

263. The most frequent portion of the male urethra to be involved with tumour:

A. Bulbomembranous **B.** Prostatic
C. Penile **D.** Fossa navicularis *(CU 7 3401)*

264. Urethral carcinoma is much more common in:

A. Women than in men **B.** Men than in women *(CU 7 3407)*

259 A 260 A 261 B 262 D 263 A 264 A

265. Seventy percent of prostate cancers arise form ___ zone and it is the zone most frequently affected by chronic prostatitis.
A. Peripheral **B.** Central
C. Transitional **D.** All of A, B, C *(CU 9 63)*

266. Testicular carcinoma *in situ* (CIS) is widely regarded as preinvasive precursor of all testicular germ cell tunors except:
A. Typical seminoma
B. Anaplastic seminoma
C. Spermatocytic seminoma
D. Mature teratoma *(CU 9 896)*

267. Risk factors for the development of testicular CIS include 1. History of testicular carcinoma 2. Extra-gonadal germ cell tumor 3. Cryptorchidism 4. Contralateral testis with unilateral testicular cancer 5. Atrophic contralateral testis with unilateral testicular cancer 6. Somatosexual ambiguity 7. Infer-tility.
A. Only 1,2,3,4 **B.** Only 4,5,6,7
C. All **D.** 3,4,5,6 *(CU 9 897)*

268. Lymphatic metastasis is common to all forms of germinal testis tumors, although, ____ almost uniformly disseminates by means of vescular invasion as well.
A. Pure choriocarcinoma
B. Spermatocytic seminoma
C. Polyembryoma
D. Immature teratoma *(CU 9 901)*

269. The American Join Committee on cancer staging for germ cell tumors is unique, because, for the first time a serum tumor marker category (S) is used to supplement the prognostic stage defined by anatomy alone. The LDH of 1.5 – 10 X N, hCG 5,000 – 50,000 mIU/ml, and AFP of 1,000 – 10,000 ng/ml comes under category:
A. S_0 **B.** S_1
C. S_3 **D.** S_2 *(CU 9 904)*

270. Testis sparing surgery is an option in patients with organ confined tumors of less than ___ cm in diameter occurring in a solitary testis or associated with contralateral tumor.
A. 3 B. 3.5
C. 2 D. 2.5 *(CU 9 909)*

271. It is a fact that roughly ___ of patients with histologically pure seminoma of testis who ultimately die of the disease are found to harbor nenseminomatous elements in metastatic sites.

265 A 266 C 267 C 268 A 269 D 270 B 271 A

A. ¾rd B. ½
C. $^1/_3$th D. ¼th *(CU 9 909)*

272. Stage II and stage IIb seminoma patients with bulky retroperitoneal disease have traditionally received adjuvant radiation. More recently, however, adjuvant chemotherapy has been preferred to retroperitoneal irradiation for retroperitoneal disease larger than ___ cm in diameter.
A. Four B. Three
C. Two D. Five *(CU 9 912)*

273. Histopathological changes in pulmonary toxicity due to bleomycin include destruction of ___ pne-umocytes.
A. I and II **B.** III
C. IV **D.** All *(CU 9 913)*

274. Lymphoma constitutes the most common secondary neoplasm of testis and the most frequent of all testicular tumors in patients older than ___ years.
A. 50 **B.** 60
C. 70 **D.** 80 *(CU 9 930)*

275. Biopsy is essential to diagnose leukemic infiltration of the testis, orhiectomy is probably unwarranted, and treatment of choice is testicular irradiation with ___ cGY in 10 fractions.
A. 1000 **B.** 2000
C. 3000 **D.** 4000 *(CU 9 931)*

276. ___ appears to be the most frequently deteted type HPV in primary and metastatic invasive penile carcinoma.
A. 18 **B.** 11
C. 16 **D.** 32 *(CU 9 962)*

277. Nuclear accumulation of ___ (presumably mutated) was shown to be an independent predictor of lymph node metastasis in squamous penile cancer.
A. VHL **B.** MET
C. P53 **D.** P52 *(CU 9 0979)*

278. Squamous cell carcinoma is characteristically radio-resistant, and dosage required to sterilize the tumor ___ thousand rads that may cause urethral fistula, stricture or stenosis with or without penile necrosis, pain, and edema.
A. Two **B.** Four
C. Six **D.** Eight *(CU 9 985)*

272 D 273 A 274 A 275 B 276 C 277 C 278 C

279. The mass in retroperitoneal fibrosis usually centers around the aorta at ___ and wraps around the ureters.
A. L4, L5 **B.** L1, L2
C. L2, L3 **D.** L5, S1 *(CU 9 1270)*

280. Now a days, the most common primary medical man-agement of idiopathic retroperitoneal fibrosis is:
A. Cyclophophamide
B. Tamoxifen
C. Mycophenolate mafetil
D. Corticosteroids *(CU 9 1271)*

281. Any renal mass that enhances with intravenous administration of contrast material on CT scanning by more than ___ Houns-field units should be consi-dered a renal cell carcinoma until proved otherwise.
A. 15 **B.** 25
C. 30 **D.** 35 *(CU 9 1571)*

282. Down regulation of E-cadherin and cadherin ___, which mediate adhesion between cancer cells, is well documented in RCC and has correlated with poor outcome in most studies.
A. 3 **B.** 6
C. 9 **D.** 12 *(CU 9 1591)*

283. Solid renal masses that also have substantial areas of negative CT attenuation numbers below ___ Houns-field units indicative of fat are diagnostic of angiomyolipomas.
A. – 10 **B.** – 20
C. – 30 **D.** – 40 *(CU 9 1571)*

284. Positive immunoreactivity for HMB – 45, a mono-clonal antibody raised against a melanoma-associated antigen, is characteristic for ____ and can be used to differentiate them from renal sarcomas.
A. AMLs **B.** RCCs
C. Reninomas **D.** Renal APU Domas *(CU 9 1579)*

285. Not true about reninsecreting juxtaglomerular tumor, or reninoma:
A. Clinical presentation include hypertension, hypo-kalemia, polydipsia, polyuria, myalgia, headache
B. Predominantly males are affected
C. Almost all patients are cured with surgical excision
D. Most are solitary, small (<3 cm), hypovascular *(CU 9 1582)*

286. The only generally accepted environmental risk factor for RCC is ___ exposure, although the relative risk have been modest, ranging from 1.4 to 2.5 compared with controls.

279 A 280 D 281 A 282 B 283 B 284 A 285 B 286 D

A. Increased consumption of tea and coffee
B. Thorotrast exposure
C. Tricholoroethylen exposure
D. Tobacco exposure *(CU 9 1583)*

287. Furham's classification system for nuclear grade in RCC of 20 mm nuclear size, irregular nuclear outline with prominent nucleoli comes under grade:
A. 1 **B.** 2
C. 3 **D.** 4 *(CU 9 1591)*

288. The more common conventional and chromophilic variants of RCC are derived from ___.
A. Proximal tubular cells **B.** Loop of Henle
C. Distal tubular cells **D.** Bowmen's capsule *(CU 9 1592)*

289. Renal medullary cell variant of RCC occurs almost exclusively in association with ___.
A. Sickle cell trait **B.** Thalassemia
C. Leukemia **D.** Bowmen's capsule *(CU 9 1596)*

290. The microvesicles of ____ characteristically stain positive for Hode's colloidal iron, indicating the presence of mucopoly-saccharide unique to RCC.
A. Chromophobe cell carcinoma
B. Medullary cell carcinoma
C. Clear cell carcinoma
D. Granular cell carcinoma *(CU 9 1595)*

291. The classical triad of pain, gross hematuria, and pal-pable abdominal mass in RCC is:
A. Now rarely found
B. Found in 10% cases
C. Found mostly in females
D. Found mostly in sickle cell trait patients *(CU 9 1597)*

292. RCC was previously referred to as:
A. Bellini's tumor **B.** Internist's tumor
B. Hale's tumor **D.** Gerota's tumor *(CU 9 1587)*

293. In the now recommended revision of the TNM system of classification (2002) of RCC, the tumor invading adrenal gland or perinephric fat but not beyond Gerota's fascia is primary tumor ___.
A. T3c **B.** T3a
C. T1b **D.** T2a *(CU 9 1601)*

287 C 288 A 289 A 290 A 291 A 292 B 293 B

294. ____ has proved to be the single most important prognostic factor for RCC.
A. Pathologic state **B.** Tumor size
C. Nuclear grade **D.** Histologic subtype *(CU 9 1604)*

295. The response in medical management of adrenocor-tical carcinomas to following drug/s has been found to be disappointing or has/have limited efficacy.
A. Mitotane and suramine
B. Ketoconazole and cisplatin
C. Etoposide
D. All of above *(CU 9 1843)*

296. The most common histologic type of malignant neo-plasia seen with bladder diverticula is ___.
A. Transitional cell **B.** Squamous cell
C. Adenocarcinoma **D.** Mixed *(CU9-2366)*

297. Unlike virtually all other common malignancies, ____ has almost never been reported as an incidental finding at autopsy.
A. Testicular cancer **B.** Bladder cancer
C. Adrenal cancer **D.** Cervical cancer *(CU9-2409)*

298. Cigarette smokers have up to___fold higher incidence of bladder cancer than do people who have never smoked, although the specific chemical carcinogen responsible in cigarette smoke has not been identified.
A. Four **B.** Six
C. Three **D.** Seven *(CU9-2413)*

299. Patients treated with cyclophosphamide have up to _____ fold increased risk of developing bladder cancer.
A. Five **B.** Seven
C. Nine **D.** Eleven *(CU9-2416)*

300. Carcinoma *in situ* of bladder may be asymptomatic or may produce severe symptoms of urgency, fre-quency, and dysuria. Urine cytopathology is positive in ___ of patients.
A. 60 – 70 **B.** 70 – 80
C. 80 – 90 **D.** 85 – 98 *(CU9-2418)*

301. One specific protein termed BLCA4 was found to be expressed in 75% of tumor tissues, 100% of normal appearing bladder epithelium from patients with bladder tumors elsewhere, and ___% in normal bladders.
A. 00 **B.** 05
C. 10 **D.** 08 *(CU9-2434)*

294 A 295 A 296 A 297 B 298 A 299 C 300 C 301 A

302. ___consumption has been reported to reduce the incidence of bladder cancer. The most abundant catechin in this is epigallocatechin-3 gallate.
A. Grape seed extract **B.** Green tea
C. Guava extract **D.** Tomato extract *(CU9-2443)*

303. ____ is the only chemotherapeutic agent approved by FDA specifically for the intravesical treatment of papillary bladder cancer.
A. Doxorubicin **B.** Valrubicin
C. Epirubicin **D.** Triethylenephosphoramide
E. Gemcitabine **F.** Docetaxel *(CU9-2459)*

304. The most common leukemic involvement of the prostate is that of chronic ___ leukemia:
A. Lymphoblastic **B.** Lymphocytic
C. Monocytic **D.** Granulocytic *(CU9-2882)*

305. External beam radiation therapy of prostate cancer typically decreases its volume by ____ months after treatment.
A. 2 **B.** 4
C. 6 **D.** 8 *(CU9-2887)*

306. ____ one needle biopsy is regarded now-a-days as the "gold standard" for diagnosis of prostate cancer.
A. TRUS gray-scale
B. Elastography guided
C. Contrast medium-enhanced Doppler guided
D. Endorectal MRI and MR spectroscopy guided *(CU9-2895)*

307. PSA density of equal to or more than ___ is associated with the presence of prostate cancer.
A. 0.15 **B.** 0.015
C. 0.012 **D.** 0.11 *(CU9-2900)*

308. Inflammation in the prostrate gland can produce transient PSA elevations, called a PSA "bounce". It usually occurs during the first____after treatment of cancer prostate and is less common with external beam radiotherapy than with brachy therapy.
A. Six months **B.** 12 months
C. 18 months **D.** Two years *(CU9-2940)*

309. The most commonly used permanent implants as brachitherapy in cancer prostate.
A. Iridium-192 seeds **B.** Iodine-125 seeds
C. Palladium-103 seeds **D.** B and C *(CU9-2941)*

302 B 303 D 304 B 305 C 306 A 307 A 308 D 309 D

310. Pretreatment prognostic factors have established roles in predicting recurrence (PSA, clinical) after external beam radiotherapy in localized disease. The factors- 1. approximately 50% 5 – year PSA failure-free survival, 2. AJCC clinical stage T2b or PSA higher than 10 but no higher than 20 ng/mL, 3. biopsy Gleason grade of 7 comes under ___ risk.

A. High **B.** Intermediate
C. Low *(CU9-3007)*

311. Benign PSA bounce phenomenon common after brac-hytherapy, reported to occur in 24% to 35% of men, more common in younger men and after implan-tation with iodine-125. The spikes, can start any time from 9 to 30 months after brachytherapy, and may last as long as ___ and double peaks can be seen.

A. 6 – 12 months **B.** 12 – 18 months
C. 18 – 24 months **D.** 24 – 30 months *(CU9-3013)*

312. High-dose-rate Brachytherapy afterloading have been developed to treat prostate cancer. This procedure utilizes high-activity____ sources in cables stored in a mobile computer-controlled lead safe.

A. ^{192}Ir **B.** ^{103}Pd
C. ^{125}I **D.** ^{186}Re *(CU9-3027)*

313. Pain usually precedes a diagnosis of spinal cord compression from prostate cancer metastases by about ____ months.

A. 2 **B.** 4
C. 6 **D.** 8 *(CU9-3029)*

314. When the diagnosis of cord compression, a medical emergency, from prostate cancer metastases is made or even suspected, all patients should receive ___ therapy.

A. Ketoconazole **B.** Steroid
C. Brachy **D.** Systemic strontium 89 *(CU9-3029)*

315. Oncolytic virus/ viruses that could be used (to infect and kill prostate tumor cells) for therapy without insertion of a transgene.

1. Adenovirus
2. Vaccinia
3. Newcastle disease virus
4. Influenza virus
5. HSV
6. Mumps
7. HIV

A. All except 5 **B.** All except 7
C. All except 3,5 and 7 **D.** All *(CU9-3030)*

310 B 311 B 312 A 313 B 314 B 315 B

316. Biochemical failure after radiation therapy has been defined by the American Society for Therapeutic Radiology and Oncology (ASTRO) as ___ cons-ecutive PSA rises, optimally separated by 3 months between measurements, after radiation therapy starting at least 2 years after the start of radiation, with the time of failure as the midpoint between the nadir and the first confirmed rise.

A. 2 **B.** 3
C. 4 **D.** 5 *(CU9-3071)*

317. Which of the following statements in relation to hormone therapy for prostate cancer is not true?

A. More than half of men meet the bone mineral density criteria for osteopenia or osteoporosis – defined as more than 2.5 standard deviation below an age specific reference mean – before the initiation of androgen deprivation therapy.

B. It has been estimated that 2 years of androgen deprivation therapy (ADT) will place the average man in the osteopenia range.

C. Bone mineral density actually increased in men receiving ADT with biphosphonate zoledronic acid.

D. Transdermal estradiol raises bone mineral density in men with prostate cancer. *(CU9-3089-90)*

318. Prophylactic radiation therapy of ___ Gy has been used to prevent gynecomastia in patients receiving androgen ablation therapy.

A. 10 **B.** 20
C. 15 **D.** 25 *(CU9-3091)*

319. Although androgen deprivation therapy is extre-mely effective systemic palliative treatment known for prostate cancers ____ patients eventually develop clinical evidence of resistance to treatment.

A. 75% **B.** 60%
C. Virtually all **D.** 40% *(CU9-3101)*

320. The combination of ___ has been approved by FDA for symptomatic hormone resistant metastatic prostate cancer.

A. Mitoxantrone and prednisone
B. Doxorubicin and cisplatin
C. Prednisone and 5-fluorouracil
D. Estramustine phosphate and docetaxel *(CU9-3106)*

316 B 317 B 318 A 319 C 320 A

321. The introduction of "bone-seeking" radiophar-maceuticals has provided a useful resource for the management of diffuse bone pain in metastatic prostate cancer patients. A study reported encou-raging synergism with ___.

A. ^{153}Sm and cisplatin **B.** ^{89}Sr and doxorubicin
C. ^{103}Pd and paclitaxel **D.** ^{125}I and ketoconazole *(CU9-3114)*

322. ___ was the first protease inhibitor to be tested and approved for use in himans, specially in multiple myeloma.

A. Brotezomib **B.** Provenge
C. Rapamycin **D.** Atrasentan *(CU9-3116)*

321 B 322 A

11 Congenital Anomalies

1. **The pronephros is the first urinary tissue to appear, in the development of the urinary system, in the region of the ten-somite embryo between:**
   A. 2nd and 6th somite
   B. 1st and 2nd somite
   C. 6th and 9th somite
   D. 1st and 8th somite *(CU 1303)*

2. **The normal ascent of the renal rudiment from the level of the sacral segments of the human embryo to the level of the lumbar segments of the newborn seems to occur by:**
   A. Caudal growth of the spine
   B. Elongate growth of the ureter
   C. Molding of the renal parenchyma
   D. Fixation of the kidney to the retroperitoneum
   E. All of the above
   F. All except C *(CU 1313)*

3. **Congenital crossed renal ectopia can be distinguished from acquired cross lateral displacement by imaging the kidneys with a cross-table, lateral view on a renogram; in the former condition, the kidneys lie:**
   A. Posterior to the great vessels
   B. Anterior to the great vessels
   C. Aligned with the native kidney posterior to the great vessels
   D. Aligned with the native kidney anterior to the great vessels *(CU 1314)*

4. **The medulla of the kidney is evident by _____ weeks' gestation on ultrasound:**
   A. Seven **B.** Seventeen
   C. Twenty-seven **D.** Thirty-seven *(CU 1314)*

5. **Between _____ days of development, the entire ureter is patent:**
   A. 28 and 35 **B.** 35 and 42
   C. 42 and 49 **D.** 49 and 56 *(CU 1315)*

1 A 2 E 3 C 4 C 5 A

6. **By 8 weeks of development the ureter is a patent tube without muscle; after 10 weeks, the epithelium of the ureter is two-layer thick; by _____ weeks, there is transitional epithelium:**
   A. 11 **B.** 12
   C. 13 **D.** 14
   E. 15 *(CU 1316)*

7. **The foetal ureters may elongate more than the kidney ascends: the ureter may absorb the excess length by becoming tortuous or folding its wall as pleats, called:**
   A. Foetal folds of Ostling
   B. Foetal folds of Mercler
   C. DeCampbell's folds
   D. Foetal folds of Osler *(CU 1317)*

8. **Triplicate ureters _____ conform regularly to the Weigert-Meyer rule:**
   A. Do **B.** Do not *(CU 1324)*

9. **The entire urinary bladder has discrete inner and outer longitudinal layers and a middle circular layer by ____ weeks of intrauterine life:**
   A. Eight **B.** 16
   C. 32 **D.** 24 *(CU 1325)*

10. **Cowper's glands are present by ____ weeks of development:**
    A. 12 **B.** 14
    C. 16 **D.** 18 *(CU 1330)*

11. **The first likelihood of renal function starts at _____ weeks of intrauterine life:**
    A. Six **B.** Nine
    C. 12 **D.** 15 *(CU 1302)*

12. **The glomerular filtration rate doubles in the first week in term infants, continues to rise, reaching adult levels by ____ years of age:**
    A. Two **B.** Three
    C. Four **D.** Five *(CU 1345)*

13. **In terms of concentrating ability, the neonatal kidney can _____ fairly well:**
    A. Concentrate **B.** Dilute *(CU 1345)*

14. **The developing kidney appears to be ____ resistant than the adult to a number of toxic agents:**
    A. More **B.** Less *(CU 1353)*

6 D 7 A 8 B 9 B 10 A 11 B 12 A 13 B 14 A

15. As with most anomalies, in bilateral renal agenesis, there is _____ preponderance:
A. Female **B.** Male *(CU 1358)*

16. What is sirenomelia:
A. Complete fusion of the upper extremities
B. Complete fusion of the lower extremities
C. Absence of or poorly-developed proximal portion of the extremities
D. Absence of or poorly-developed distal portion of the extremities *(CU 1359)*

17. The major source of the amniotic fluid, constituting greater than 90 per cent by the third trimester is:
A. The urine produced by the developing kidneys
B. The secretion from the tracheobronchial tree and across the fetal skin
C. The transudate from the maternal serum across the fetal membranes or from maternal circulation in the placenta
D. The secretion from the amniotic epithelium and fetal urine *(CU 1360)*

18. The syndrome not associated with unilateral renal agenesis:
A. Turner's **B.** Poland's
C. Vater **D.** Staufer
E. Dysmorphogenesis *(CU 1363)*

19. Two completely independant ureters, each with its own entrance into the bladder is seen in 50 per cent cases of supernumerary kidney; the Weigert-Meyer principle, however, usually is obeyed, but in _____ per cent the caudal kidney has a ureter that does not follow the rule and enters the trigone below the ipsilateral ureter:
A. 5 **B.** 10
C. 15 **D.** 20 *(CU 1365)*

20. Megacalycosis is the nonobstructive enlargement of calyces due to malformation of the renal papillae. It occurs predominantly in _____ in a ratio of 6:1:
A. Males **B.** Females *(CU 1390)*

21. Approximately ___ per cent of normal renal pelvis are bifid:
A. 20 **B.** 15
C. 10 **D.** 5 *(CU 1393)*

15 B 16 B 17 A 18 D 19 B 20 A 21 C

22. The most common cause of dilation of the collecting system in the fetal kidney is:
A. Ureteropelvic junction obstruction
B. Multicystic dysplastic kidney
C. Persistent fetal convolutions
D. Ureteral polyps *(CU 1394)*

23. Out of the following, which is the most common associated congenital anomaly with ureteropelvic junction obstruction:
A. Renal dysplasia
B. Multicystic disease of the kidney
C. Ureteropelvic junction in the opposite kidney
D. Renal agenesis *(CU 1398)*

24. A dysplastic kidney contains focal, diffuse, or segmentally arranged primitive structures, especially primitive ducts, as a result of:
A. Abnormal pronephric differentiation
B. Abnormal metanephric differentiation
C. Abnormal mesonephric differentiation
D. Hypodysplasia of foetal kidneys *(CU 1446, CMC)*

25. The combination of a marked reduction in the number of nephrons and hypertrophy of each nephron (oligomeganephronia) is usually:
A. Unilateral **B.** Bilateral *(CU 1446)*

26. Ask-Upmark kidney is the name for:
A. Oligomeganephronia
B. Segmental hypoplasia
C. Renal hypodysplasia
D. True renal hypoplasia *(CU 1446, CMC)*

27. Generally, the crossed ectopia involves migration of the _____ kidney to the _____ side with absence of the right kidney, rather than the reverse:
A. Left, right **B.** Right, left *(CU 1371)*

28. Among the crossed ectopia with fusion, which is the most common variety:
A. Unilaterally fused kidney with superior ectopia
B. Unilaterally fused kidney with inferior ectopia
C. Bilaterally fused kidney with superior ectopia
D. Bilaterally fused kidney with inferior ectopia *(CU 1371)*

22 A 23 C 24 B 25 B 26 B 27 A 28 B

29. In crossed ectopia, the crossed kidney usually lies _____ to its normal counterpart on that side:
A. Cranial **B.** Caudal
C. Left lateral **D.** Right lateral *(CU 1373)*

30. In crossed ectopia with fusion, no further rotation is likely once the two kidneys have joined; an anteriorly placed pelvis suggests_____ fusion:
A. Late **B.** Early
C. Medial **D.** Lateral *(CU 1373)*

31. Which is the second most common anomaly of fusion of kidneys?
A. Sigmoid kidney **B.** Lump kidney
C. Disc kidney **D.** L-shaped kidney *(CU 1373)*

32. The highest incidence of associated anomalies occur in children with solitary renal ectopia; the most common is either absence of vas deferens or ____ in males, or vaginal atresia or unilateral uterine abnormality in female:
A. Absence of seminal vesicle
B. Cryptorchidism
C. Hemianopsia
D. Apnia *(CU 1375)*

33. The most common of all renal fusion anomalies is:
A. Horse-shoe kidney **B.** Lump kidney
C. Disc kidney **D.** Sigmoid kidney *(CU 1376)*

34. In its mature form, the pelvis and the ureters of the horse-shoe kidney are usually _____ placed, crossing ventrally to the isthmus:
A. Medially **B.** Laterally
C. Posteriorly **D.** Anteriorly *(CU 1376)*

35. The horse-shoe kidney is usually located adjacent to the:
A. L-1 or L-2 vertebra
B. L-3 or L-4 vertebra
C. L-4 or L-5 vertebra
D. L-2 or L-3 vertebra *(CU 1377, BHU)*

36. The abnormality of horse-shoe kidney occurs between ____ weeks of gestation:
A. 2nd and 4th **B.** 4th and 6th
C. 6th and 8th **D.** 8th and 10th *(CU 1376)*

29 B 30 B 31 A 32 B 33 A 34 D 35 B 36 B

37. The most common type of renal artery aneurysm is:
A. Arteriovenous **B.** Dissecting
C. Fusiform **D.** Saccular *(CU 1387)*

38. Generally, excision of the renal artery aneurysm is not recommended if:
A. The hypertension can be easily controlled
B. An arteriovenous fistula is present
C. An incomplete ring-like calcification is present
D. The aneurysm is larger than 2.5 cm
E. The patient is female and likely to become pregnant
F. The aneurysm increases in size in serial angiograms
(CU 1387)

39. _____ per cent of all renal arteriovenous fistulas are of congenital type:
A. More than 75 **B.** Less than 25
C. About 50 **D.** 90 *(CU 1387)*

40. Females are affected three times as often as males, and the right kidney is involved slightly more than the left by renal A-V fistula. The lesion is generally located in the:
A. Lower pole **B.** Midportion
C. Upper pole **D.** Renal pelvis *(CU 1387)*

41. The congenital renal A-V fistula variant rarely behaves like its acquired counterpart: the former may disappear spontaneously after several months:
A. True **B.** False *(CU 1388)*

42. The most common presenting symptom in hydrocalycosis is:
A. Painless total haematuria
B. Upper abdominal or flank pain
C. Palpable abdominal mass
D. Azotaemia *(CU 1389)*

43. Megacalycosis is most likely congenital in origin. It occurs predominantly in males in a ratio of:
A. 6:1 **B.** 9:1
C. 3:1 **D.** 4:1 *(CU 1390)*

44. Clinically, reflux via the ___ pole orifice into its pelvis is the most common anomaly among the duplex kidney:
A. Lower **B.** Upper *(CU 1404)*

45. The most common ureteral anomaly is:

37 D	38 A	39 B	40 C	41 A	42 B	43 A	44 A	45 B

A. Agenesis **B.** Duplication
C. Triplication **D.** Atresia and hypoplasia *(CU 1406)*

46. In duplication, about one-third of the renal parenchyma is served by the _____ collecting system, on the average:
A. Upper **B.** Lower
C. Middle **D.** Posterior *(CU 1409)*

47. The primary form of obstructed megaureter is associated most commonly with a ____ adynamic segment (the functionally obstructed megaureter):
A. Proximal **B.** Distal
C. Midureteric *(CU 1413)*

48. The "yo-yo" effect is:
A. The regurgitation of the bolus of urine into the upper ureter, in case of obstructed megaureter
B. The churning of the bolus of urine in the upper segment of the ureter, after regurgitation from the lower adynamic segment of obstructed megaureter
C. The persistence of *E.coli* infection in the obstructed megaureter
D. The chronic renal failure occurring due to functionally obstructed megaureter *(CU 1413)*

49. The megaureter in prune-belly syndrome is:
A. Most often nonobstructed
B. Most often obstructed
C. Most often cyclical
D. Never leads to renal failure *(CU 1414)*

50. Three areas of the ureter are particularly liable to congenital ureteral stenosis. They are, in order of decreasing frequency:
A. Midureter at the pelvic brim, ureteropelvic junction, distal ureter just above the ureterovesical junction
B. Distal ureter just above the ureterovesical junction, ureteropelvic junction, midureter at the pelvic brim
C. Ureteropelvic junction, midureter at the pelvic brim, distal ureter just above the ureterovesical junction *(CU 1415)*

51. Ureteral valves are uncommon causes of ureteral obstruction consisting of transverse folds of redundant mucosa that contain smooth muscle. Transverse, nonobstructing mucosal folds are present in ___ per cent of ureters in newborns and gradually disappear with growth:

46 A 47 B 48 B 49 A 50 B 51 B

A. 15 **B.** 5
C. 10 **D.** 25 *(CU 1415)*

52. Congenital spiral twists of the ureter seldom give rise to obstruction and hydronephrosis. This is:
A. True **B.** False *(CU 1416)*

53. Primary congenital vesicoureteral reflux is classified as a disorder of ureteral termination in which the orifice is too ___ and ____ and is loosely attached to the angle of a poorly developed trigone:
A. Low: Lateral **B.** Low: Medial
C. High: Lateral **D.** High: Medial *(CU 1418)*

54. Of all ectopic ureters, ____ per cent are associated with a duplicated system, and most of these occur in females:
A. 90 **B.** 80
C. 70 **D.** 60 *(CU 1419)*

55. In females affected with an ureter not opening at the normal location at the angle of the trigone, about ___ present with urinary incontinence:
A. Half **B.** One-fourth
C. One-third **D.** One-fifth *(CU 1421)*

56. In reports from countries with mostly white population, single-system ectopic ureters constitutes 20 per cent of all ectopic ureters and most occur in males. In ___ , by contrast, 70 per cent of all ectopic ureters are single system, mostly noted in females with vaginal drainage:
A. India **B.** Norway
C. Sri Lanka **D.** Japan
E. Mexico *(CU 1421)*

57. Who classified ureteroceles and simple (or intravesical or adult) and ectopic varieties?
A. Ericsson **B.** Stephen
C. Passerini **D.** Glazel *(CU 1422)*

58. Who's classification of ureteroceles include stenotic, sphincteric, sphincterostenotic and cecoureterocele types?
A. Ericsson **B.** Stephen
C. Campbell **D.** Smith *(CU 1422)*

59. In most paediatric series, ____ ureteroceles are more common:

52 B 53 C 54 B 55 A 56 D 57 A 58 B 59 A

A. Ectopic
B. Intravesical
C. Both occur with equal frequency *(CU 1423)*

60. Persistence of which of the following veins is the embryonal cause of preureteral vena cava:
A. Left supracardinal vein
B. Right posterior cardinal vein
C. Right supracardinal vein
D. Subcardinal vein *(CU 1425, CMC)*

61. The incidence of preureteral vena cava is about one in 1500 cadavers and is three to four times more common in:
A. Males **B.** Females
C. Eunuchs **D.** Male pseudohermaphroditism
(CU 1426)

62. Herniation of the ureter is an extremely rare condition and most of these are:
A. Paraperitoneal **B.** Intraperitoneal
C. Retroperitoneal *(CU 1428)*

63. Which of the following conditions has been designated as "pan-bud anomaly"?
A. Renal hypoplasia
B. Renal hypodysplasia
C. Medullary sponge kidney
D. Parapelvic and renal sinus cysts *(CU 1448)*

64. Infantile polycystic kidney disease is:
A. Autosomal recessive
B. Autosomal dominant
C. X-linked disorder
D. Multifactorial genetic disease *(CU 1451)*

65. Which is *not true* about the clinical features of 'Infantile' polycystic kidney disease:
A. The earlier the age at which the patient is identified, the more severe is the disease
B. In infants in whom this disease is evident at birth, the usual clinical course is death within the first two months as result of uremia or respiratory failure
C. Children whose disease appears later in life develop renal failure and hypertension more rapidly than those in whom this disease is manifested at birth
D. In general, the clinical problems of children whose disease appears later in life are the consequence of liver disease rather than the renal condition *(CU 1451-52)*

60 D 61 A 62 A 63 B 64 A 65 C

66. Individuals affected with 'Adult' polycystic kidney disease manifest the disease, although not necessarily symptomatically. If they live long enough but renal failure is seldom seen before the age of:
A. 25 **B.** 40
C. 30 **D.** 20 *(CU 1453)*

67. The incidence of renal cell carcinoma probably is seven fold the expected incidence in patients with:
A. Infantile polycystic kidney disease (PKD)
B. Acquired renal cystic disease (ARCD)
C. Adult polycystic kidney disease (PKD)
D. Cortical microcystic disease (Familial hypoplastic glomerulocystic kidney disease) *(CU 1457)*

68. A diagnosis of adult polycystic kidney disease may be confirmed by cytogenetic testing if an abnormality of chromosome ___ can be identified:
A. 3 **B.** 6
C. 9 **D.** 16 *(CU 1457)*

69. Which of the following conditions that give rise to polyuria is resistant to vasopressin?
A. Diabetes insipidus
B. Juvenile nephronophthisis
C. Medullary cystic disease
D. Both B and C *(CU 1459)*

70. Alstrom's syndrome is a nephropathy accompanied by:
A. Blindness, obesity, diabetes mellitus, and nerve deafness
B. Blindness, obesity, diabetes insipidus, and deafness
C. Nephrocalcinosis, psychic moans, obesity, and blindness
D. Aniridia, hemihypertrophy, blindness, and nerve deafness *(CU 1459)*

71. Sodium replacement is indicated early in the course of this disease; later, dialysis and renal transplantation will need to be considered:
A. Familial nephrotic syndrome
B. Cortical microcystic disease
C. Juvenile nephronophthisis
D. Juvenile polycystic kidney disease *(CU 1460)*

72. Classically, tuberous sclerosis is described as a part of a triad of:
A. Epilepsy (60% of cases), mental retardation (80% of cases), and adenoma sebaceum (75% of cases)

66 B 67 B 68 D 69 D 70 A 71 C 72 B

B. Epilepsy (80% of cases), adenoma sebaceum (75% of cases), and mental retardation (60% of cases)
C. Epilepsy (90% of cases), mental retardation (80% of cases), and adenoma sebaceum (70% of cases)
D. Adenoma sebaceum (90% of cases), epilepsy (70% of cases), and mental retardation (50% of cases) *(CU 1462)*

73. von Hippel-Lindau disease is an autosomal dominant condition manifested by cerebellar hemangioblastoma; retinal angiomas; cyst of the pancreas, kidney, and epididymis; pheochromocytoma; and renal cell carcinomas. The most common malformation among them is:
A. Renal cysts
B. Cerebellar hemangioblastomas
C. Epididymal cysts
D. Pancreatic cysts
E. Retinal angiomas *(CU 1462)*

74. Renal cell carcinoma occurs in ____ per cent of individuals affected with von Hippel-Lindau disease:
A. 35-38 **B.** 25-28
C. 15-18 **D.** 5-8 *(CU 1462)*

75. Meckel's syndrome consists of microcephaly, polydactyly, posterior encephalocele, and cystic kidneys; it is a/an:
A. Autosomal recessive condition
B. X-linked disorder
C. Autosomal dominant condition
D. Multifactorial genetic disorder *(CU 1464)*

76. It is not a genetic cystic disease of the kidney:
A. Multicystic dysplastic kidney
B. Zellweger cerebrohepatorenal syndrome
C. Medullary cystic disease
D. Juvenile nephrophthisis *(CU 1465)*

77. This kidney typically appears to be a "bunch of grapes":
A. Multicystic kidney
B. Multilocular cystic nephroma
C. Infantile polycystic kidney
D. Adult polycystic kidney *(CU 1465)*

78. The most common type of renal cystic disease, and one of the most common causes of an abdominal mass, in infants:

73 A 74 A 75 A 76 A 77 A 78 B

A. Acquired renal cystic disease
B. Multicystic dysplasia
C. Autosomal recessive polycystic kidney
D. Multilocular cyst *(CU 1466)*

79. Normal contralateral kidney and ureter is found in:
A. Multilocular cystic nephroma
B. Multicystic kidney
C. Autosomal recessive polycystic kidney disease
D. Autosomal dominant polycystic kidney disease *(CU 1469)*

80. A classic benign simple cyst has all the following criteria on sonography *except:*
A. Absence of internal echoes
B. Any shape
C. Sharply-defined, thin, distinct wall with a smooth and distinct margin
D. Good transmission of sound waves through the cyst with consequent acoustic enhancement behind the cyst *(CU 1473)*

81. Not an indication of cyst puncture:
A. Suspected infection, in which case puncture may be therapeutic as well as diagnostic
B. Presence of low level echoes on sonography but a classic cyst on CT
C. Borderline lesion in a poor surgical candidate
D. Homogeneous content on sonography and CT *(CU 1474)*

82. In medullary sponge kidney, the most common presentation is:
A. Gross haematuria
B. Urinary tract infection
C. Abdominal or flank mass
D. Renal pain *(CU 1476)*

83. Bosnaik divides cysts and cystic lesions into four categories: lesions that are minimally complicated, such as by septations, small calcifications, infection, or high density are:
A. Type I **B.** Type II
C. Type III **D.** Type IV *(CU 1476)*

84. Not a feature of medullary sponge kidney:
A. It has been associated with hemihypertrophy, Ehlers-Danlos syndrome, anodontia, and Caroli's disease
B. It appears to be an inherited condition
C. One-third to one-half of patients have hypercalcemia
D. Any clinical presentation is usually seen after the age 20 *(CU 1477)*

79 A 80 B 81 D 82 D 83 B 84 B

85. One of the following conditions is not associated with glomerular cysts:
A. Sporadic glomerulocystic kidney disease
B. Familial hypoplastic glomerulocystic disease
C. Juvenile nephronophthisis in association with hepatic fibrosis
D. Autosomal recessive polycystic disease *(CU 1478)*

86. Thompson and coworkers (1986) grade acquired renal cystic disease according to the number of cysts involved; grade 4 is:
A. Greater than 14 cysts bilaterally
B. Greater than 10 cysts bilaterally
C. Less than 5 cysts bilaterally
D. Greater than 16 cysts unilaterally *(CU 1479)*

87. Calyceal diverticulum (pyelogenic cyst):
A. Is lined by a smooth layer of squamous epithelium and covered by a thick patch of renal cortex
B. Is generally asymptomatic and discovered incidentally on an intravenous urogram
C. Usually arise from the fornix of a calyx and most often affect lower pole calyces
D. Achalasia of the calyceal neck is its main etiology *(CU 1482)*

88. The predominant type of renal sinus cyst appears to be derived from lymphatics. Most of these cysts are multiple and bilateral:
A. True **B.** False *(CU 1485)*

89. During the eighth week of gestation in the male embryo, the foetal testis begins to secrete testosterone and müllerian inhibiting factor. Testosterone, synthesised and secreted by the foetal Leydig cells, is under the regulation of maternal:
A. Follicle stimulating hormone
B. Human chorionic gonadotropin
C. Alpha-fetoprotein
D. Dehydroepiandrosterone *(CU 1544)*

90. In reality, the testis is never more than ____ from the internal inguinal ring during its development:
A. 1.3 mm **B.** 1.3 cm
C. 1.3 inches **D.** 2 cm *(CU 1544)*

91. The active androgen that induces differentiation of the external genitalia in the male embryo is:
A. Dihydrotestosterone
B. Testosterone

85 D 86 A 87 B 88 A 89 B 90 A 91 A

C. Dehydroepiandrosterone
D. Androstenedione *(CU 1544)*

92. During testicular descent, the ____ precedes the ____ in its journey into the scrotum:
A. Epididymis: Testis **B.** Testis: Epididymis *(CU 1544)*

93. The cremasteric reflex is most active between the second and seventh years of age. It is ____ at birth:
A. Absent **B.** Weakly present
C. Present but not in its active form *(CU 1545)*

94. In ____ per cent of patients with cryptorchidism, the defect is bilateral:
A. 5 **B.** 10
C. 15 **D.** 20 *(CU 1545)*

95. It is generally accepted that one of the factors mentioned below somehow play the major role in promoting the descent of the testis into the scrotum; and that is:
A. Traction
B. Differential growth
C. Intra-abdominal pressure
D. Epididymal maturation
E. Hormonal *(CU 1546)*

96. The most common location of an ectopic testis in a clinical situation is:
A. Perineum
B. Femoral canal
C. Superficial inguinal pouch
D. Suprapubic area
E. Opposite scrotal compartment *(CU 1548)*

97. In a young child with bilateral nonpalpable testes, ultrasound scanning failed to locate the testes; CT scanning and MRI could not be performed as he did not cooperate; testicular vein is blind ending on venography. Can one unequivocally state that the testes are absent?
A. Yes **B.** No *(CU 1549)*

98. The basal gonadotropin levels are extremely high in a boy of age seven years and there is no response by testosterone to exogenous hCG. The diagnosis goes in favour of:
A. Bilateral anorchia
B. Bilateral cryptorchidism
C. Transverse testicular ectopia
D. Bilaterally atrophied testes *(CU 1549)*

92 A 93 A 94 B 95 E 96 C 97 B 98 A

99. Statistically, the undescended testis is reported to be 35 to 48 times more likely to undergo malignant degeneration than the normal testis; with regard to location, an abdominal testis is ____ times more likely to undergo malignant degeneration than an inguinal testis:

A. 40 **B.** 20
C. 8 **D.** 4 *(CU 1550)*

100. In bilateral cryptorchidism, there is a 15 per cent chance of developing a tumour in the opposite testis if one of the testis becomes involved with a tumour. If both testes are intra-abdominal and one testis becomes malignant, there is a ____ per cent chance of the other testis becoming malignant:

A. 30 **B.** 15
C. 60 **D.** 40 *(CU 1551)*

101. It may be found in greater than 90 per cent of patients with cryptorchidism:

A. Malignant degeneration
B. Torsion
C. Hernia
D. Infertility *(CU 1551)*

102. The best known genetic syndromes that are associated with the undescended testis are:

A. Klinefelter's, Noonan's, and Prader-Willi's
B. Klippel-Feil, Meckel's, Turner's
C. Klinefelter's, Kanner, Kimmelstiel-Wilson
D. Familial nephrotic, Ivemark, Kallmann's *(CU 1552)*

103. In clinical practice, the majority of infantile inguinal hernias appear in the first year, the diagnosis being made most commonly in the first month after birth. The condition affects boys_____ times more frequently than girls:

A. 9 **B.** 6
C. 4 **D.** 11 *(CU 1554)*

104. A hydrocele is very common after birth, occurring in about 6 per cent of full-term boys, and is almost universally secondary to a patent processus vaginalis; therapy should be delayed until after the processus closes, which may occur spontaneously within the ____ year of life:

A. First **B.** Second
C. Third **D.** Fourth *(CU 1555)*

99 D 100 A 101 C 102 A 103 A 104 A

105. The most common misdiagnosis of testicular torsion is:
A. Acute epididymitis
B. Idiopathic scrotal edema
C. Hematocele
D. Hydrocele *(CU 1556)*

106. Neonatal testicular torsion is:
A. Extravaginal torsion
B. Intravaginal torsion *(CU 1557)*

107. *Not a true* statement about the neonatal torsion of the testis:
A. It is an extravaginal type of torsion
B. Clinically, the neonate presents with a firm, hard and large scrotal mass that transilluminates brilliantly, and is very tender
C. Usually, the mass is not tender and the child does not appear to be disturbed by it
D. Experimental evidence suggest that immunologic damage to the contralateral testis may occur if a necrotic testis that has undergone torsion is left *in situ* *(CU 1557)*

108. *True* statement about the prenatal ultrasound examination:
A. After 16 weeks of gestation, amniotic fluid volume reflects mainly contribution from the fetal urine
B. At about 15 weeks of gestation, the fetal kidney's internal architecture appears distinctly
C. The urinary bladder is detectable by 12th week of gestation
D. Polyhydramnios has been defined as an amniotic fluid volume greater than 2500 ml *(CU 1564)*

109. A pregnancy complicated by bleeding, especially in the ____ trimester, is more likely to produce a baby with congenital malformations:
A. First **B.** Second
C. Third *(CU 1590)*

110. Any intervention to decompress an obstructed kidney of the fetus must be accomplished in the ____ trimester to preserve renal function:
A. First **B.** Second
C. Third *(CU 1591)*

111. The most important prognostic feature in the foetus with bilateral hydronephrosis and distended bladder is:
A. Pelvicalyceal dilatation at specific gestational age
B. Renal pelvic diameter greater than 7 mm

105 A 106 A 107 B 108 A 109 A 110 A 111 C

C. The volume of the amniotic fluid
D. The presence or absence of ureteral dilatation *(CU 1595)*

112. The most common obstructive cause of fetal hydronephrosis is:
A. Posterior urethral valve
B. Multicystic kidney
C. Vesicoureteral reflux
D. Ureteropelvic obstruction *(CU 1595)*

113. The most common cause of neonatal hypertension is:
A. Renal artery stenosis
B. Polycystic kidney disease
C. Coarctation of the aorta
D. Bronchopulmonary dysplasia *(CU 1601)*

114. Most infants will void within the first 12 hours of life, and more than 90 per cent will void by 24 hours. Urinary output in the term infant is approximately 1 to 2 ml/kg/hour; in the preterm infant, urinary output is approximately:
A. 0.5 ml/kg/hour **B.** 4 ml/kg/hour
C. 6 ml/kg/hour **D.** 8 ml/kg/hour *(CU 1601)*

115. The most common cause of sexual ambiguity is:
A. Congenital adrenal hyperplasia
B. Reifenstein syndrome
C. Persistent müllerian duct syndrome
D. 17 alpha-hydroxylase deficiency *(CU 1602)*

116. The fluid most commonly found in neonatal ascites is _____, and obstructive uropathy is the usual underlying cause:
A. Urine **B.** Chyle
C. Meconium **D.** Bile *(CU 1602)*

117. The most common primary obstructive lesion of neonatal urinary ascites is:
A. Ureteropelvic junction obstruction
B. Posterior urethral valve
C. Urethral atresia
D. Bladder perforation secondary to traumatic delivery
(CU 1603)

118. Which of the following is a consistent feature of renal vein thrombosis in a neonate:
A. Dehydration **B.** Infection
C. Thrombocytopenia **D.** Proteinuria *(CU 1609)*

112 D 113 C 114 B 115 A 116 A 117 B 118 C

119. Approximately ____ per cent of cases of neonatal adrenal haemorrhage are bilateral:
A. 5 **B.** 19
C. 15 **D.** 25
E. 10 *(CU 1611)*

120. The incidence of renal artery thrombosis increases following umbilical artery catheterization when the tip of the catheter is located above:
A. L_1 **B.** L_2
C. L_3 **D.** L_4 *(CU 1614)*

121. Neonatal torsion of the spermatic cord does appear to be related to:
A. Prematurity **B.** Low birth weight
C. Traumatic delivery **D.** None of them *(CU 1616)*

122. Extravaginal torsion of the spermatic cord does not have the strong predisposition to a similar occurrence on the contralateral side. It is:
A. True **B.** False
C. Cannot be ascertained *(CU 1617)*

123. Nocturnal enuresis occurring after the age of ___ is generally considered a cause of concern:
A. 2 years **B.** 3 years
C. 4 years **D.** 5 years
E. 6 years *(CU 1621)*

124. In the first year of life, the number of voidings per day remain fairly constant at about:
A. 10 **B.** 15
C. 20 **D.** 25
E. 30 *(CU 1621)*

125. The capacity of the newborn's bladder is approximately one to two ounces. Each year until the age of____, the bladder enlarges by about one ounce per year. Bladder capacity in childhood can be accurately estimated and expressed by the formula: bladder capacity (in ounces) equals age (in years) plus 2:
A. 10 **B.** 11
C. 12 **D.** 13
E. 14 *(CU 1622)*

126. The single most important static urodynamic observation in children with enuresis is a _____ compared with normals:

119 E 120 A 121 D 122 A 123 D 124 C 125 C 126 A

A. Reduced bladder capacity
B. Lack of voluntary control over the periurethral striated muscle sphincter
C. Hyperactive bladder
D. Lack of volitional control over the spinal micturition reflex *(CU 1622)*

127. At least four randomised controlled trials have shown that ____ is the most effective means of eliminating bed wetting:
A. Bladder training **B.** Responsibility reinforcement
C. Conditioning therapy **D.** Hypnotherapy
E. Pharmacotherapy *(CU 1629)*

128. The most common organism responsible for urinary tract infection in infants and children is:
A. *Escherichia coli* **B.** *Pseudomonas aeruginosa*
C. *Proteus mirabilis* **D.** *Klebsiella* *(CU 1670)*

129. Childhood urinary tract infections are more common in girls than in boys at all ages *except:*
A. First few months of life
B. Second year of life
C. The school going age
D. They are always more common in girls *(CU 1670)*

130. The rate of spontaneous resolution in patients who experience resolution of primary vesicoureteral reflux is about ___ per cent each year:
A. 10 to 15 **B.** 15 to 20
C. 20 to 25 **D.** 30 to 35 *(CU 1673)*

131. Mild or moderate dilatation of the ureter and the renal pelvis with no or minimal forniceal blunting comes under which grade of International reflux study classification:
A. I **B.** II
C. III **D.** IV
E. V *(CU 1673)*

132. 'Loss of papillary impression and thinning of the renal parenchyma over the papilla' is grade ____ renal parenchymal scarring:
A. a **B.** b
C. c **D.** d *(CU 1674)*

133. It is more sensitive test for detection of vesicoureteral reflux:

127 C 128 A 129 A 130 D 131 C 132 A 133 B

A. Fluoroscopic examination
B. Nuclear voiding cystourethrogram
C. Voiding cystourethrogram in continuation with IVU
D. Cystourethroscopy *(CU 1680)*

134. Which of the following is an ideal prophylactic anti-microbial agent for VUR case, that has low serum levels, high urinary levels, and has minimal effect on the normal fecal flora?
A. Erythromycin **B.** Nitrofurantoin
C. Cephalexin **D.** Trimethoprim *(CU 1681)*

135. Nitrofurantoin should not be used in children with glucose-6-phosphate dehydrogenase deficiency because it is an oxidising agent and can cause:
A. Hypertension **B.** Severe anaemia
C. Hemolysis **D.** Obstructive jaundice *(CU 1681)*

136. Ureterocele most frequently occur in a ratio:
A. Females (4:1)
B. Males (4:1)
C. Females (10:1)
D. Males (10:1) *(CU 7 1831)*

137. Match the following spectrum of prune-belly syndrome with its category classification:

A. External features may be mild or incomplete; uropathy is less severe; renal function is stable	1. Category classification II
B. Oligohydramnios, pulmonary hypoplasia, or pneumothorax. May have urethral obstruction or patent urachus and club foot	2. Category classification III
C. Typical external features and uropathy of the full-blown syndrome but no immediate problem with survival. May have mild or unilateral renal dysplasia. May or may not develop urosepsis or gradual azotemia	3. Category classification I

(CU 7 1923)

134 B 135 C 136 A 137 A-2, B-3, C-1

138. Which of the following is not true:

A. The presence of the characteristic musculoskeletal defect of the exstrophy anomaly with no major defect in the urinary tract has been named classical exstrophy

B. Reflux in the closed extrophied bladder occurs in nearly 100 per cent of cases

C. The most common complication in exstrophy patients after urethral reconstruction is urethrocutaneous fistula

D. Cloacal exstrophy is also known as vesicointestinal fissure or extrophia splanchnia *(CU 7 1941-1971)*

139. Congenital megacystis is:

A. An entity describing the bladder associated with massively refluxing megaureters

B. Pseudomonas induced massive dilatation of the urinary bladder

C. Massive dilatation of the bladder without outlet organic obstruction

D. Megalourethra with atonic massive dilatation of the bladder *(CU 7 1983)*

140. Which of the following is the most common abnormality causing congenital obstruction of the more distal urethra?

A. Anterior urethral valves

B. Syringoceles

C. Diverticulum of the urethra

D. Valvular obstruction of the fossa navicularis *(CU 7 2085)*

141. Elevated serum potassium concentration in the presence of normal renal function suggests type ___ renal tubular acidosis.

A. I **B.** II

C. III **D.** IV *(CU9-3154)*

142. When renal function *in utero* is impaired the consequences of this are unique to fetal environ-ment. The association between renal agenesis, oligohydramnios, and pulmonary hypoplasia is the Potter's syndrome that bears___ name.

A. Her **B.** His

C. The patient's **D.** His profession's *(CU9-3185)*

143. The incidence of certain prenatally detected uropathies is markedly sex specific. Hydronephrosis of all etiologies is ___ times more common in ___.

A. 7 – 11 : Females **B.** 4 – 5 : Males

C. 4 – 5 : Females **D.** 7 – 11 : Males *(CU9-3186)*

138 A 139 A 140 A 141 D 142 A 143 B

144. In long-term follow-up study of patients undergoing and surviving *in utero* vesicoamniotic shunting for bypassing obstructed urethra, patients with___ had the best chance of adequate renal function.

A. Urethral atresia **B.** Urethral valves
C. Prune-belly syndrome **D.** Periurethral cyst *(CU9-3189)*

145. Immediate care of the neonate with posterior urethral valve is dictated by the severity of presentation and overall clinical status. ___ is preferred as bladder drainage until a decision is made about appropriate initial therapy, usually valve ablation.

A. 5 Fr feeding tube
B. 6 Fr Foley's
C. Suprapubic vesicostomy
D. Suprapubic percutaneous cystotomy
E. CIC *(CU9-3190)*

146. ____ syndrome is associated with macroglossia, hepatosplenomegaly, nephromegaly and hypoglycemia secondary to pancreatic beta cell hyperplasia in a large gestational age in infant.

A. Beckwith-Wiedemann **B.** Hemolytic-uremic
C. Gitelman's **D.** Neonatal Bartter's *(CU9-3208)*

147. Almost ___% of infants affected with bilateral renal agenesis are stillborn. Most of them if born alive do not survive beyond first 24 to 48 hours.

A. 90 **B.** 70
C. 40 **D.** 20 *(CU9-3272)*

148. When either the PKD1 or the PKD2 gene is abnormal, cystic kidneys can develop. PKD1 is located on chromosome 16, and PKD2 on __.

A. 12 **B.** 10
C. 8 **D.** 4 *(CU9-3306)*

149. Despite the clinical variability of ARPKD, it appears that only mutation of a single gene named PKHD1, located on chromosome 6, is responsible for the autosomal recessive polycystic kidney disease. The gene produces a protein called ___, also known as polyductin.

A. Fibrocystin **B.** Polycystin-1
C. Polycystin-2 **D.** None of these *(CU9-3315)*

150. Although the two conditions, ____, are similar anatomically and clinically, they have a different mode of transmission and different clinical onset.

144 C 145 A 146 A 147 C 148 D 149 A 150 A

A. Juvenile nephrolithiasis and medullary cystic disease
B. Juvenile polycystic kidney disease and adult polycystic kidney disease
C. Congenital nephrosis and cortical microcystic disease
D. Tuberous sclerosis complex and familial hypoplastic glomerulocystic kidney *(CU9-3326)*

151. _____ in ureter are now considered as not obstructive and disappear with a person's linear growth.
A. Valvular mucosal folds
B. Ostling's folds
C. Persistent fetal convolutions
D. Upper ureteral polyps *(CU9-3360)*

152. At 37 days' gestation, Chwalle's membrane, a two layered structures transiently divides the early ureteric bud form the urogenital sinus. It is post-ulated that its incomplete dissolution results in ___.
A. Bilateral single-system ectopic ureter
B. Ureterocele
C. Ureteral triplication
D. Blind-ending duplication of ureter *(CU9-3397)*

153. Other names that have been applied to this syndrome include triad syndrome, Eagle-Barrett syndrome, and abdominal musculation syndrome.
A. Beckwith-Wiedemann
B. Prune-belly syndrome
C. Gitelman's
D. Neonatal Bartter's *(CU9-3482)*

154. _____ abnormalities, ranging from 30% to 45% are second in frequency to those of the genitourinary tract and abdominal wall in pruen-belly syndrome.
A. Orthopedic **B.** Cardiac
C. Pulmonary **D.** Gastrointestinal *(CU9-3487)*

155. These characteristics (full triad features, minimal or unilateral renal dysplasia, no pulmonary hypoplasia, may progress to renal failure) comes under category _____.
A. I **B.** II **C.** III

156. Connolly and coauthors (1995), in a review of 181 children with bladder exstrophy, reported _____ in 81.8% of boys and 10.5% of girls.

151 B 152 B 153 B 154 A 155 B 156 A

A. Inguinal hernias **B.** Skeletal defects
C. Anorectal defects **D.** Ureteral reconstruction *(CU9-3503)*

157. The following statement in a patient with exstrophy is not true.
A. Sexual function and libido are usually normal.
B. In Woodhouse's experience most patients required vaginoplasty before intercourse could take place.
C. Review of literature reveals 45 women who successfully delivered 49 normal offspring.
D. Male patients with genital reconstruction seldom have ejaculatory difficulty and fathers children well. *(CU9-3551-52)*

158. In the first trimester, the fetal bladder is considered to be dilated if larger than _____ mm on ultrasound evaluation.
A. 2 **B.** 5
C. 7 **D.** 9 *(CU9-3574)*

159. Which of the following urachal anomalies is most common?
A. Patent urachus
B. Umbilical-urachus sinus
C. Urachal cyst
D. Vesicourachal diverticulum *(CU9-3576)*

160. Desquamated epithelial cells in urachal cysts may become infected _____ has been identified to be the most common organism.
A. *E. coli* **B.** *Klebsiella*
C. *S. aureus* **D.** *Pseudomonas* *(CU9-3578)*

161. Bladder hemangioma are mostly seen in associatin with _____.
A. Prune-belly syndrome
B. Klippel-Feil syndrome
C. Klinefelter's syndrome
D. Klippel-Trenaunay syndrome *(CU9-3582)*

162. Imperforate anus may be part of a spectrum of hindgut abnormalities that include sacral agencies and even a presacral mass or meningocele recently labeled as _____ syndrome.
A. Currarino **B.** VACTREL
C. Ochoa **D.** Rainbow's *(CU9-3647)*

163. Intramuscular injection of testosterone enanthate, either 25 mg/dose or _____ mg/kg/dose, given for a total of two or three doses for hypospadias repair is a reliable means of obtaining penile growth in the appropriate patient.

157 D 158 C 159 A 160 C 161 D 162 A 163 B

A. 1 **B.** 2
C. 3 **D.** 4 *(CU9-3712)*

164. The most common clinical presentation for Mayer-Rokitansky-Küster-Hauser syndrome is:
A. Infertility
B. Dyspareunia
C. Primary amenorrhoea
D. Pelvic kidney *(CU9-3827)*

165. The patient with bilaterally impalpable testes or a unilaterally impalpable testis and hypospadias should be regarded as having an intersex disorder until pro-ven otherwise, whether or not the genitalia appear ambiguous.
A. True **B.** False *(CU9-3827)*

166. Most common entity of persistent urogenital sinus:
A. Genital ambiguity state
B. Pure urogenital sinus
C. Cloacal anomalies
D. Female exstrophy *(CU9-3846)*

164 C 165 A 166 A

12 Paediatric Urology and Renovascular Hypertension

1. **Factors suggesting that the reflux will cease with growth and will not impede renal development or function include all of the following *except:***
   A. Grade 4 reflux or less
   B. Orifice in the 'B' or 'C' position with a stadium or horse-shoe configuration
   C. Relatively young child
   D. Intravesical ureter more than 5 mm in length
   E. Freedom from obstruction or infection *(CU 1696)*

2. **Match the following according to the Lyon classification of ureteric orifice morphology in primary reflux:**

A. Volcano-shaped orifice on cystoscopy	1. Type D
B. Golf hole orifice	2. Type A
C. Stadium orifice	3. Type C
D. Horse-shoe orifice	4. Type B

(CU 1692)

3. **The radiographic appearance of renal scarring develops over a period of at least:**
   A. 3 months **B.** 6 weeks
   C. 8 months **D.** 6 months *(CU 1701)*

4. **About ___ per cent of patients with ureteropelvic junction obstruction will be found to have reflux:**
   A. 5 **B.** 10
   C. 15 **D.** 20 *(CU 1703)*

5. **The length of the submucosal course of the ureter when the bladder is full is the single most useful guideline in estimating the probability that the reflux will subside spontaneously. It normally measures approximately ___ mm at birth, 10 mm by age of 10 years, and 13 mm at adulthood:**
   A. 3 **B.** 5
   C. 8 **D.** 2 *(CU 1705)*

1 A 2 A:2, B:1, C:4, D:3 3C 4 B 5 B

6. **From a clinical point of view, four possible explanations are made for renal failure in VUR children without history of infection to account for severe reflux nephropathy. According to embryologic studies, which one of the following explanations is often the correct one:**
   A. Asymptomatic infection in conjunction with reflux resulted in renal damage
   B. Sterile reflux persisting over several years damaged the kidney permanently
   C. Renal damage occurred when an episode of sphincter dyssynergia or bladder hyperreflexia resulted in elevated voiding pressures, worsening reflux, and initiating or compounding of parenchymal damage
   D. Renal dysgenesis was present at birth, resulting in a relatively fixed renal mass with renal failure occurring only when the kidneys were overwhelmed by ever-increasing body mass
   (CU 1702)

7. **The hippuran I 131 renogram is a sensitive test for differentiating obstructive from nonobstructive megaureter. When the curve continue to appear obstructed, a standard dose, 1 mg of furosemide per kg body weight is administered; if the amount of radioactivity is reduced by half in less than ____ minutes, the study findings are normal and UVJ obstruction is not present:**
   A. 30 **B.** 20
   C. 10 **D.** 5 *(CU 1713)*

8. **Maximal renal relative pressure (renal pelvis pressure minus needle resistance minus bladder pressure) below ___ cm of water is considered to indicate an absence of obstruction:**
   A. 5 **B.** 10
   C. 15 **D.** 20
   E. 25 *(CU 1715)*

9. **The diagnosis of primary megaureter is fulfilled under the following conditions *except:***
   A. The bladder and bladder outlet appear normal
   B. Ureterectasis begins above a narrow, usually short, midureteral segment, which may be difficult to visualise on the intravenous pyelogram. The ureter is dilated for a varying length above but is usually not as tortuous as one would expect, give the degree of ureterectasis. Calycectasis may or may not be present

6 D 7 C 8 C 9B

C. Vesicoureteral reflux is absent, except in refluxing megaureter
D. The ureteral orifice has a normal appearance on endoscopy *(CU 1717)*

10. WHO described an extravesical approach for ureteroneocystostomy?
A. Politano and Leadbetter **B.** Paquin
C. Lich and co-workers **D.** Glenn-Anderson *(CU 1719)*

11. The standard surgical therapy for primary obstructive megaureter derives from the work of Politano and Leadbetter, Paquin, Creevy, and Hendren. The key to success is atraumatic manipulation of the ureter and preservation of the blood vessels that enter the wall of the dilated ureter on its:
A. Medial aspect **B.** Lateral aspect
C. Anterior aspect **D.** Posterior aspect *(CU 1722, CMC)*

12. The most frequent complication of reimplantation in ureteral duplication is:
A. Persistence of reflux in the reimplanted ureter
B. Occurrence of reflux in the ureter on which the other is reimplanted
C. Ureteral obstruction
D. Haemorrhage *(CU 1732)*

13. For incontinence, ___ ml of teflon paste is commonly injected around the bladder neck and urethra to provide needed resistance:
A. 20 to 30 **B.** 14 to 20
C. 5 to 10 **D.** 9 to 15 *(CU 1733)*

14. The classic sign of an ectopic ureteral orifice in a girl with an otherwise normal voiding pattern after toilet training is:
A. Continuous incontinence
B. Initial incontinence
C. Terminal incontinence
D. Persistent urinary tract infection *(CU 1743)*

15. In excretory urography the usual feature of ectopic ureter is a nonvisualising or poorly visualising upper pole of a duplex system that may be massively hydronephrotic. The so called 'drooping flower appearance' is due to:
A. Displacement of the upper pole upwards and outwards by the lower pole
B. Displacement of the lower pole downwards and outwards by the upper pole

10 C 11 A 12 A 13 B 14 A 15 B

C. Displacement of the lower pole downwards and inwards by the upper pole
D. Displacement of the upper pole upwards and inwards by the lower pole *(CU 1744)*

16. The dilated ureter is clearly extravesical with a thick septum of bladder muscle between the ureteral lumen and bladder lumen on ultrasonography in:
A. Ureterocele **B.** Ectopic ureter
C. Bladder diverticula **D.** Vesical hernia *(CU 1746)*

17. In general, the more distant the ectopic ureteral orifice is located from the trigone, the _____ likely the involved kidney is to be dysplastic:
A. More **B.** Less
C. There is no such relation *(CU 1751)*

18. In bilateral single system ectopic ureters, a very rare condition, the ureters usually drain into the ____ in the male and into the distal urethra in female:
A. Seminal vesicle **B.** Ejaculatory duct
C. Vas deferens **D.** Prostatic urethra *(CU 1752)*

19. Syringocele is:
A. Cystic dilatation of the ducts of Cowper's gland
B. Saccular dilatation of the glands of Littre
C. Acute dilatation of the intraprostatic glands
D. Abnormal dilatation of the central canal of the spinal cord *(CU 1886)*

20. Sixty-five per cent of hypospadias are anteriorly located, 15 per cent middle, and 20 per cent posteriorly. Out of the anterior locations, which is most common:
A. Glanular **B.** Coronal
C. Anterior penile **D.** Posterior penile *(CU 1893)*

21. MRI has been used to visualise the spinal cord in cases of sacral agenesis, and a sharp cutoff of the conus opposite ___ vertebra seems to be a consistent finding:
A. T-12 **B.** L-5
C. L-3 **D.** T-10 *(CU 1650)*

22. The 'milk back' phenomenon within the urethra occurs in:
A. Detrusor hyperreflexia in children
B. Small capacity hypertonic bladder

16 B 17 A 18 D 19 A 20 B 21 A 22 A, B

C. Bilateral vesicoureteral reflux
D. Posterior urethral valve *(CU 1656)*

23. Hinman syndrome is:
A. Lazy bladder syndrome
B. Neurospinal dysraphism
C. Psychogenic non-neuropathic bladder
D. Childhood small capacity hypertonic bladder *(CU 1661)*

24. The risk of recurrence of bladder exstrophy in a given family is approximately one in:
A. 100 **B.** 50
C. 300 **D.** 500 *(CU 1775)*

25. Which of the following statements regarding bladder exstophy is *false*?
A. On prenatal ultrasonography, absence of a normal fluid-filled bladder and presence of a mass of echogenic tissue lying on the lower abdominal wall suggests the very diagnosis
B. It tends to occur in infants of elderly mother
C. The wide and waddling gait, although noticeable when the child begins to walk, soon corrects itself and leaves no orthopaedic problem
D. The distance between the umbilicus and the anus is always foreshortened *(CU 1775)*

26. Pseudoexstrophy of the bladder is:
A. Bladder extrusion is minimal and is present only over the abnormal umbilicus
B. The musculoskeletal defect associated with classic exstrophy with no significant defect of the urinary tract, and presence of an isolated ectopic bowel segment on the inferior abdominal wall near the genital area
C. Only a portion of the bladder elements (mucosa) remains outside
D. Presence of the characteristic musculoskeletal defect of the exstrophy anomaly with no major defect in the urinary tract *(CU 1775)*

27. Reflux in the closed exstrophied bladder occurs in nearly __ per cent of cases and requires subsequent surgery:
A. 100 **B.** 90
C. 80 **D.** 70 *(CU 1784)*

23 C 24 A 25 B 26 D 27 A

28. The exstrophied bladder that is estimated at birth to have a capacity of___ml or more and that demon-strates elasticity and contractility may be expected to develop an useful size and capacity following successful closure:
A. 7 **B.** 5
C. 3 **D.** 1 *(CU 1785)*

29. A common complication of primary bladder closure in exstrophy of bladder:
A. Bladder prolapse **B.** Bladder outlet obstruction
C. Wound dehiscence **D.** Stich granuloma *(CU 1804)*

30. Of carcinomas identified in exstrophied bladders, 80 per cent are adenocarcinomas. The prevalence of this carcinoma in these bladders is approximately ___ fold greater than in normal bladders:
A. 40 **B.** 100
C. 200 **D.** 400 *(CU 1807)*

31. The risk of adenocarcinoma of the colon in exstrophy patients following ureterosigmoidostomy is _____ times that of the general population 25 years of age or under:
A. 8000 **B.** 7000
C. 500 **D.** 400 *(CU 1807)*

32. Congenital bladder diverticulum almost always occurs in:
A. Males **B.** Females *(CU 1814)*

33. The most common organism cultured in the urachal cyst fluid is:
A. *E. coli* **B.** *Klebsiella*
C. *Staphylococcus aureus* **D.** *Proteus mirabilis* *(CU 1817)*

34. An urachal sinus extends ___ unlike an omphalo-mesenteric duct remnant, which extends inward toward the peritoneal cavity:
A. Superiorly **B.** Inferiorly
C. Right laterally **D.** Left laterally *(CU 1817)*

35. Virtually by definition, the fully developed Prune-Belly syndrome occurs almost exclusively in:
A. Boys
B. Girls
C. True hermaphroditism
D. Congenital adrenal hyperplasia *(CU 1851)*

36. The most frequent and benign finding of which syndrome is a dimple on the outer aspect of the knee or elbow at which point the skin is adherent to the underlying joint structures:

28 C 29 A 30 D 31 B 32 A 33 C 34 B 35 A 36 A

A. Prune-Belly syndrome
B. Klinefelter's syndrome
C. Turner's syndrome
D. Kimmelsteil-Wilson syndrome *(CU 1855)*

37. In neonates with Prune-belly syndrome, there is a considerable variability in the severity of the disorder and in the urgency with which urologic advice is sought. For this reason, patients are placed into different groups according to the severity. The combination of 'external features' are mild or incomplete; uropathy is less severe and renal function stable' comes under which category:
A. I **B.** II
C. III **D.** IV *(CU 1856)*

38. Which of the following portions of urethra are entirely dependent on androgen action for differentiation?
A. Prostatic and membranous
B. Bulbous and penile
C. Prostatic and bulbous
D. Membranous and penile *(CU 1872)*

39. It is now generally accepted that the folds of which type of posterior urethral valve are not obstructive and do not exist as a clinical entity:
A. I **B.** II
C. III **D.** IV *(CU 1872)*

40. Type I urethral valves make-up more than 95 per cent of these lesions. It is:
A. An obstructing membrane situated distal to the verumontanum, at the level of the membranous urethra
B. An obstructing membrane that radiates in a distal direction from the verumontanum posteriorly toward the membranous urethra anteriorly
C. A valve radiating in a cranial direction from the verumontanum to the posterolateral aspect of the bladder neck
D. A continuous valve that radiates in a distal direction from the verumontanum toward the membranous urethra, and in a cranial direction toward the bladder neck *(CU 1874)*

41. Most neonates who die as a result of posterior urethral valves die from:
A. Respiratory causes **B.** Renal causes
C. Infectious causes **D.** Cardiac causes *(CU 1877)*

37 C 38 B 39 B 40 B 41 A

42. Several anatomic conditions seen in association with urethral valves appear to be associated with generally improved renal function, presumably by allowing lower intraluminal pressures during fetal development; these are all of the following *except:*
A. Massive unilateral vesicoureteral reflux
B. Large bladder diverticula
C. Urinary ascites
D. Type III posterior urethral valve *(CU 1879)*

43. In association with urethral valves, as many as ___ per cent of these patients have varying degree of vesical dysfunction that does not necessarily abate after relief of the obstruction, and ultimately this abnormal bladder function has a significant impact on prognosis:
A. 15 **B.** 25
C. 35 **D.** 45 *(CU 1882)*

44. The most common congenital abnormality giving rise to anterior urethral obstruction:
A. Anterior urethral valves
B. Valvular obstruction of the fossa navicularis
C. Syringoceles
D. Posterior urethral valves *(CU 1886)*

45. Megalourethra has been divided into two varieties: scaphoid and fusiform. Corpus spongiosum is generally thought to be the only abnormal segment with:
A. Scaphoid megalourethra
B. Fusiform megalourethra *(CU 1888)*

46. There are dorsal and ventral varieties of duplication of urethra; most duplications occur:
A. In the same sagittal plane
B. In the same coronal plane
C. Dissimilar coronal plane
D. Dissimilar sagittal plane *(CU 1890)*

47. The incidence of hypospadias has been calculated to be one in ____ live births; fathers have hypospadias in 8 per cent of patients, and 14 per cent of male siblings are affected:
A. 100
B. 200
C. 300
D. 1000 *(CU 1895)*

42 D 43 B 44 A 45 A 46 A 47 C

48. Orthoplasty is:
A. Correction of the fibrous chordee by excising the fibrous band
B. The dorsal plication of Buck's fascia on either side of the midline (at 10 and 2 O'clock positions) to release chordee
C. Excision of the *tunica albuginea* on the ventrum with replacement by dermal graft or with *tunica vaginalis* while correcting chordee
D. Giving only a midline incision along the septum between the two corpora cavernosa in releasing the chordee *(CU 1898)*

49. Postoperative erections are a problem in the postpubertal patients after hypospadias repair; the best medication for it is probably:
A. Diazepam **B.** Promethazine
C. Amylnitrate **D.** Ciproterone acetate *(CU 1913)*

50. The breadth of the newborn clitoris ranges from 2 to 6 mm; 'clitoral index' is obtained by multiplying the breadth of the glans by its length, with an index of 4.35 being the:
A. Lower limit of normal
B. Upper limit of normal
C. Mean of normal
D. Cut off point *(CU 1920)*

51. Penile torsion refers to a rotational defect of the penile shaft; it almost always occurs in a:
A. Counterclockwise direction
B. Clockwise direction *(CU 1923)*

52. The stretched penile length (it correlates more closely with the erectile length than the relaxed length), in general, of a term newborn should be at least:
A. 1.5 cm **B.** 2 cm
C. 2.5 cm **D.** 3 cm *(CU 1924)*

53. Aphallia results from failure of development of the genital tubercle. This disorder is very rare with an estimated incidence of one in:
A. 10,000,000 **B.** 100,000
C. 10,000 **D.** 1,000 *(CU 1925)*

54. Meatal stenosis is a condition that almost always results from neonatal:
A. Phimosis **B.** Paraphimosis
C. Circumcision **D.** Balanoposthitis *(CU 1926)*

48 A 49 C 50 B 51 A 52 C 53 A 54 C

55. Ectopic scrotum is rare and refers to the anomalous position of the hemiscrotum along the inguinal canal; most commonly it is:
A. Perineal **B.** Infrainguinal
C. Suprainguinal *(CU 1928)*

56. Differential diagnosis of interlabial masses in a neonate or young girl includes all of the following *except:*
A. Clitoral hypertrophy
B. Paraurethral cyst
C. Urethral prolapse
D. Prolapse ectopic ureterocele
E. Sarcoma botryoides *(CU 1930)*

57. Lyon's ring is:
A. Unilateral obstructing vaginal septum
B. Vaginal duplication
C. The site of the distal urethral narrowing in girls
D. A form of labial adhesion *(CU 1932)*

58. Vaginal agenesis occurs in one of every ___ females and is the second most common cause of primary infertility in women after gonadal dysgenesis:
A. 4000-5000 **B.** 40,000-50,000
C. 400-500 **D.** 2,000-4,000 *(CU 1934)*

59. During orchiopexy, any sutures in the testis should penetrate the *tunica albuginea* on ___, because this is the area least likely to contain major superficial artery:
A. Medial aspect of the upper pole
B. Lateral aspect of the upper pole
C. Medial aspect of the lower pole
D. Lateral aspect of the lower pole *(CU 1940)*

60. Any time acute torsion of the spermatic cord is suspected and cannot be ruled out, emergency:
A. Radioisotope study should be done
B. Surgical exploration is indicated
C. Manual detorsion must be tried first
D. Use of Doppler stetho will convincingly confirm the diagnosis *(CU 1945)*

61. About 15 per cent of children with Wilms' tumour have other congenital abnormalities; hemihypertrophy is found in 1 of:
A. 70 cases **B.** 32 cases
C. 56 cases **D.** 23 cases *(CU 1968)*

55 C 56 A 57 C 58 A 59 A 60 B 61 B

62. An increased incidence of Wilms' tumour, embryonal carcinomas, and hepatoblastomas is associated with:
A. Aniridia
B. Hemihypertrophy
C. Beckwith-Wiedemann syndrome
D. Neurofibromatosis *(CU 1968)*

63. Extrarenal Wilms' tumour have been found in:
A. Retroperitoneum, posterior mediastinum, inguinal canal, sacrococcygeal area
B. Anterior mediastinum, scrotal sac, pleural cavity, vas deferens
C. Posterior mediastinum, third ventricle, urinary bladder, seminal vesicle
D. Ureters, prostate, seminal vesicles, epididymis *(CU 1971)*

64. Unfavourable histologic types of Wilms' tumour is:
A. Multilocular cyst
B. Rhabdoid tumour
C. Rhabdomyosarcoma
D. Congenital mesoblastic nephroma *(CU 1971)*

65. Which of the following histologic type of Wilms' tumour is same as 'the bone metastasising renal tumour of the childhood'?
A. Clear cell sarcoma
B. Rhabdoid tumour
C. Rhabdomyosarcoma *(CU 1974)*

66. In bilateral synchronous Wilms' tumours, there is almost a ____ per cent incidence of nephrogenic rests with the incidence of perilobar variety being twice of intralobar nephrogenic rests:
A. 100 **B.** 90
C. 80 **D.** 70 *(CU 1976)*

67. More than three quarters of cases of Wilms' tumour present with:
A. An abdominal mass with increasing abdominal girth
B. An acute onset of pain with fever, abdominal mass, anaemia and hypertension
C. Gross haematuria
D. Hypertension *(CU 1976)*

68. Wilms' nephritis is:
A. Wilms' tumour associated with hypotension
B. Wilms' tumour associated with gross haematuria
C. Wilms' tumour associated with glomerulonephritis
D. Wilms' tumour associated with nephrotic syndrome *(CU 1977)*

62 B 63 A 64 B 65 A 66 A 67 A 68 D

69. Calcification is rarely present in Wilms' tumour but, when found, it has a characteristic:
A. Peripheral "egg-shell" pattern
B. Stippled pattern
C. Mustache sign
D. Thumb printing pattern *(CU 1977)*

70. About ____ per cent of Wilms' tumours are bilateral:
A. 3 **B.** 5
C. 7 **D.** 10 *(CU 1977, JIPMER)*

71. Although the Wilms' tumour may be completely solid or predominantly cystic, the tumour characteristically exhibits a ____ echopattern:
A. Homogeneous **B.** Heterogeneous
C. Anechoic **D.** Hyperechoic *(CU 1978)*

72. Which of the following may be the most cost-effective single imaging technique, on postoperative follow-up of Wilms' tumour?
A. CT scanning **B.** Ultrasonography
C. IVU **D.** MRI *(CU 1978)*

73. Arteriography, which carries a significant morbidity in childhood is recommended by the NWTS (National Wilms' Tumour Study of America) in all of the following cases *except:*
A. When the mass is clearly intrarenal
B. When the mass is so small that it cannot be assessed by other modalities
C. When the tumours are suspected to be bilateral, especially when heminephrectomy is being considered
D. When there is nonvisualisation of the kidney and it cannot be adequately assessed by other means *(CU 1978)*

74. The adrenal gland is to be removed along with the Wilms' tumour, while doing a nephrectomy, irrespective of at which pole the tumour sits. This to:
A. False **B.** True *(CU 1979 BHU)*

75. When a Wilms' tumour seems unresectable, consideration should be given to pretreatment with __, with a subsequent surgical attempt at tumour removal:
A. Radiotherapy
B. Chemotherapy
C. Both chemotherapy and radiotherapy
D. Chemotherapy, radiotherapy, or both *(CU 1980)*

69 A 70 D 71 B 72 D 73 A 74 A 75 D

76. The most important prognostic factor in cases with Wilms' tumour is:
A. Age of the patient
B. Histology of the tumour
C. Distant metastasis
D. Lymph node involvement
E. Tumour extension at the site of primary tumour
(CU 1981, CMC)

77. All of the following are favourable characteristics in patients with relapsed Wilms' tumour *except:*
A. Favourable histology tumour that recurred only in the lung
B. Local relapse in the abdomen when radiotherapy had not been previously given
C. Originally stage I or stage II tumour
D. Tumours originally treated with only two drugs
E. Tumours that recurred 12 or more months after diagnosis
(CU 1981)

78. The most frequent site/sites of metastases from Wilms' tumours is/are:
A. Lungs **B.** Liver
C. Adrenal glands **D.** Skeletal *(CU 1978)*

79. The standard therapy for stage IV favourable histology Wilms' tumour:
A. Triple chemotherapy with pulmonary irradiation to 1200 cGy
B. Actinomycin D and vincristine chemotherapy with flank irradiation to 1000 cGy
C. Double chemotherapy, pulmonary irradiation to 1200 cGy, and flank irradiation to 1500 cGy
D. Triple chemotherapy with flank irradiation to 1200 cGy
(CU 1982)

80. Chemotherapy for Wilms' tumour is usually commenced after surgery once bowel function has been regained; radiation therapy is generally begun ____ days after surgery:
A. 1 to 3 **B.** 5 to 8
C. 7 to 14 **D.** 14 to 21 *(CU 1982)*

81. The most common benign secondary neoplasm in patients treated previously for Wilms' tumour:
A. Lipoma **B.** Fibroma
C. Haemangioma **D.** Exostosis *(CU 1984)*

82. The incidence of synchronous bilateral Wilms' tumour is approximately:

76 B 77 C 78 A 79 A 80 A 81 D 82 A

A. 4.2 per cent **B.** 5.2 per cent
C. 3.2 per cent **D.** 9.2 per cent *(CU 1985)*

83. The incidence of all of the following is more fre-quent with bilateral Wilms' tumour *except:*
A. Hemihypertrophy
B. Aniridia
C. A positive family history for cancer
D. Genitourinary anomalies *(CU 1985)*

84. The overall prognosis of synchronous bilateral Wilms' tumour is ____ than the metachronous bilateral Wilms' tumour:
A. Almost equal **B.** Poorer
C. Better *(CU 1985)*

85. The most common primary neoplasm of the kidney of childhood other than Wilms' tumour is:
A. Cholesteatoma
B. Lymphangioma
C. Rhabdomyosarcoma
D. Renal cell carcinoma
E. Ossifying tumour of the infantile kidney *(CU 1986)*

86. Which is the most common malignant tumour of infancy and after brain tumours, the most common malignant solid tumour of childhood?
A. Neuroblastoma **B.** Nephroblastoma
C. Pheochromocytoma **D.** Wilms' tumour *(CU 1987)*

87. All of the following organs are rarely the site of metastases from neuroblastoma *except:*
A. Skin **B.** Heart
C. Lungs **D.** Brain
E. Spinal cord *(CU 1991)*

88. For abdominal tumours, an intravenous pyelography should be routinely carried out. With a suprarenal neuroblastoma, the kidney is characteristically displaced ____ with the maintenance of normal calyceal pattern:
A. Superiorly and medially
B. Inferiorly and laterally
C. Inferiorly and medially
D. Laterally and superiorly *(CU 1992)*

89. Which of the following agents can image both primary and metastatic neuroblastoma?

83 B 84 C 85 D 86 A 87 A 88 B 89 D

A. ^{51}Cr-EDTA **B.** ^{99m}Tc-DTPA
C. ^{99m}Tc-DMSA **D.** ^{131}I-MIBG *(CU 1992)*

90. In which stage neuroblastoma does not have survival rate on the order of 80 per cent?
A. Stage I **B.** Stage II
C. Stage III **D.** Stage IV-S *(CU 1994)*

91. All of the following factors are important in the prognosis of neuroblastoma *except:*
A. Site of origin
B. Samuel index
C. DNA content of tumour cells
D. Lymph nodal status
E. Age at diagnosis
F. Serum ferritin level *(CU 1994)*

92. For disseminated neuroblastoma (stages III and IV),____ alone appears to be the most important prognostic variable:
A. Serum ferritin **B.** Shimada index
C. Stage of disease **D.** Age at diagnosis *(CU 1995)*

93. An increased incidence of rhabdomyosarcoma has been reported in patients with:
A. Neurofibromatosis
B. Oral hemangioma
C. Prune-belly syndrome
D. Hemihypertrophy *(CU 1997}*

94. Incomplete removal of biopsy with gross residual disease comes under ___ group of rhabdomyosarcoma:
A. Group I **B.** Group II
C. Group III **D.** Group IV *(CU 1999)*

95. Maternal diethylstilbesterol during pregnancy has been strongly implicated in the aetiology of:
A. Adenocarcinoma of the infant vagina
B. Clear cell adenocarcinoma
C. Lymphohemangioma
D. Adenocarcinoma of the extrophied bladder *(CU 2002)*

96. Testicular tumours in children represent roughly two per cent of all testicular tumours, and peak age incidence occurs at roughly:
A. 1 year **B.** 2 years
C. 3 years **D.** 4 years *(CU 2002)*

90 C 91 B 92 A 93 A 94 C 95 B 96 B

97. The half-life of AFP is ___ days so that, after successful removal of a yolk cell tumour, levels should be normal (less than 20 ng/ml), usually within one month:
A. 5 days **B.** 8 days
C. 3 days **D.** 11 days *(CU 2003)*

98. A child younger than one year of age has an AFP level that rapidly falls to normal after radical inguinal orchiectomy for germ cell tumour and has no evidence of metastatic spread:
A. Should be observed for two years with chest radiographs and serum AFP levels
B. A course of vincristine and actinomycin D must be given for a total of six courses over one year
C. Radiotherapy should be routinely given to iliac group of lymph nodes
D. Chemotherapy should be given with vincristine, bleomycin, and cisplatin *(CU 2004)*

99. Gonadoblastoma of childhood, a neoplasm containing an intimate mixture of germ cells and germinal stromal cells. Is bilateral in:
A. One-fourth of cases **B.** One-third of cases
C. Half of the cases *(CU 2005)*

100. The most common tumour that arises in an undescended testis is the seminoma. If the testis is brought down into the scrotum, the incidence of which tumour rises:
A. Seminoma **B.** Embryonal carcinoma
C. Gonadoblastoma **D.** Lymphoma *(CU 2006)*

101. The prognosis for an individual who develops a malignancy in a surgically treated undescended testis:
A. Parallels that of an individual with normally descended gonads who develops a malignancy
B. Is worse than that of an individual with normally descended gonads who develops a malignancy because of distortion of the anatomy of lymphatics
C. Is better than the individual with normally descended testis who develops a malignancy due to destruction of inguinal lymphatics during orchiopexy
D. Cannot be compared with the malignancy of an individual developing it in a normally descended testis *(CU 2006)*

102. For operational purposes, the World Health Organisation has defined hypertension in adults as a systolic pressure greater than 160 mm Hg and/or a diastolic pressure greater than:

97 A 98 A 99 B 100 B 101 A 102 B

A. 90 mmHg **B.** 95 mmHg
C. 100 mmHg **D.** 110 mmHg *(CU 2018)*

103. In children, a rise in blood pressure occurs with age, with an upper limit of normal reaching ____ by age 12 to 15 years:
A. 130/80 mmHg **B.** 120/70 mmHg
C. 140/90 mmHg **D.** 110/70 mmHg *(CU 2018)*

104. Which of the following is the most common fibrous lesion leading to renovascular hypertension?
A. Intimal fibroplasia
B. Fibromuscular hyperplasia
C. Medial fibroplasia
D. Perimedial (subadventitial) fibroplasia *(CU 2021)*

105. The half life of plasma renin is usually reported as between ____, and its major site of metabolism is in the liver:
A. 5 and 10 minutes **B.** 10 and 15 minutes
C. 15 to 20 minutes **D.** 20 to 25 minutes *(CU 2024)*

106. The only laboratory finding of importance in renovascular hypertension is ____, although it is found in less than 20 per cent of cases:
A. Hyponatremia **B.** Hyperkalemia
C. Hypokalemia **D.** Hypercalcaemia *(CU 2027)*

107. ____ per cent of the large population of patients of essential hypertension have high peripheral renin activity (PRA):
A. 8 **B.** 16
C. 24 **D.** 32 *(CU 2031)*

108. The treatment of choice of patients with renovascular hypertension due to medial fibroplasia is:
A. ACE inhibitors
B. Converting enzyme inhibitors (CEIs)
C. Percutaneous transluminal renal artery angioplasty
D. Surgical intervention *(CU 2039)*

109. All of the following are suitable lesions for treatment with percutaneous renal artery angioplasty, *except:*
A. Fibromuscular dysplasias
B. Bilateral, osteal stenosis
C. Nonoccluded atherosclerotic renal artery stenoses
D. Recurrent stenosis following initially successful percutaneous renal artery angioplasty *(CU 2038)*

103 A 104 C 105 C 106 C 107 B 108 C 109 B

110. The following criteria have been established for angiographic screening of atherosclerotic renal artery disease: (1) evidence of generalised atherosclerosis (2) unilateral small kidney (3) mild to moderate azotemia (serum creatinine level greater than 1.5 mg/dl, and (4) hypertension. If the patient is subsequently found to have a high grade, greater than — per cent, arterial stenosis affecting the entire renal mass (namely, in cases in which such a stenosis is present bilaterally or involves a solitary kidney), then intervention is recommended:

A. 50 **B.** 75
C. 90 **D.** 60 *(CU 2039-40, BHU)*

111. An absolute contraindication to laparoscopy in children would be:

A. Obesity **B.** Prior surgery
C. Omphalitis **D.** Anaemia
E. Prematurity *(AUA 94-20)*

112. Laparoscopic nephrectomy in children is most frequently performed for:

A. Wilms' tumour
B. Renal abscess
C. Multicystic dysplasia
D. Mesoblastic nephroma
E. Polycystic kidney disease *(AUA 94-20)*

113. During laparoscopy for localisation and orchiectomy of cryptorchoid testis if the spermatic vessels and vas deferens end blindly cephaloid to the inguinal ring:

A. The procedure can be terminated
B. The testis needs to be located intraabdominally elsewhere
C. An inguinal exploration is necessary
D. An abdominal exploration is necessary
E. Conversion to operative laparoscopy for orchiectomy should commence *(AUA 94-20)*

114. During passage of the laparoscope, which vessel is most frequently injured:

A. Aorta
B. Vena cava
C. Inferior epigastric artery
D. External iliac artery
E. Middle sacral artery *(AUA 94-20)*

115. Which of the following would be considered a serious complication of laparoscopy?

110 B 111 C 112 C 113 A 114 C 115 E

A. Conversion to laparotomy for a suspected problem
B. Pneumoscrotum
C. Shoulder pain postoperatively
D. Subcutaneous emphysema
E. Omental evisceration *(AUA 94-20)*

116. Laparoscopy should be terminated for:
A. Verres needle injury to bladder
B. Trochar injury to the sigmoid colon
C. Verres needle injury to stomach
D. Preperitoneal insufflation of carbon dioxide
E. Intravesical insufflation of carbon dioxide *(AUA 94-20)*

117. When inspecting the pelvis laparoscopically for non-palpable testis, the patient should be in which position:
A. Flat
B. Trendelenburg
C. Reverse Trendelenburg
D. Flank
E. Modified flank *(AUA 94-20)*

118. The most common paediatric application for laparoscopy is:
A. Localisation of a nonpalpable testis
B. Ureteroneocystostomy
C. Nephrectomy
D. Orchiectomy
E. Renal biopsy *(AUA 94-20)*

119. If a carbon dioxide embolus is suspected during laparoscopy:
A. Reposition the patient in Trendelenburg with left side up
B. Reposition the patient in Trendelenburg with right side up
C. Reposition the patient in reverse Trendelenburg with right side-up
D. Complete the procedure as quickly as possible
E. Convert to open laparotomy *(AUA 94-20)*

120. Bilateral grade IV vesicoureteral reflux has:
A. About a 10 per cent resolution rate
B. A greater chance to resolve than left sided unilateral VUR
C. About 30 per cent renal scarring rate when detected
D. About seven per cent surgical complication rate *(AUA 93-5)*

121. 'Big Bang' concept of Ransely and Risdon is:
A. Dysfunctional voiding producing very high bladder pressure
B. Vesicoureteral reflux + urinary tract infection + intrarenal reflux due to papillary anomalies

116 B 117 C 118 A 119 B 120 A 121 B

C. Pressure effect on the papilla of the kidney due to sterile reflux
D. Due to free oxygen radicals being produced by the inflammatory response to the bacteria
E. Highlighted the dramatic effect of the initial infection in producing significant renal scarring *(AUA 93-5)*

122. High bacterial virulence has been shown:
A. To cause ureteral dysfunction with dilatation and reflux of the bacteria into the kidney
B. To be associated with P—fimbria only
C. To be an insignificant factor when associated with degree and rapidity of renal scarring
D. To be so rapid that oral antibiotics are ineffective in the treatment of pyelonephritis
E. To overgrow normal bowel flora *(AUA 93-5)*

123. Which of the following best complete the statement? The pathophysiology of vesicoureteral reflux has been shown to be due to:
A. A combination of congenital ureterovesical anomaly and dysfunctional voiding
B. A variety of aetiologies
C. Developmental anomaly of ureteral bud
D. Congenital ureterovesical junction abnormality with lateral ectopia and gaping orifice
E. Begins with cystitis altering the ureterovesical junction automatically *(AUA 93-5)*

124. DMSA renal scan shows:
A. A much better sensitivity and specificity to detect renal scarring than IVU
B. A clearing of the radionuclide after several hours
C. The effect of ischaemia/oedema on the parenchyma in pyelonephritis but are unable to predict which changes will ultimately be scarring
D. Such a good detail that they have replaced the IVU in the management of VUR
E. Long-term effect of renal radiation may be significant *(AUA 93-5)*

125. The following statements are related to 'reflux nephropathy' (RN) and VUR:
A. Hypertension is the presenting symptom in 5 per cent of patients with RN
B. The most effective way to prevent RN with VUR is detecting VUR with increased use of prenatal ultrasound

122 A 123 B 124 C 125 B

C. The most effective way to prevent RN with VUR is screening school children for UTI
D. ACE inhibitors may benefit the progression of ESRD when proteinuria is detected
E. The most effective way to prevent RN with VUR is early treatment of pyelonephritis *(AUA 93-5)*

126. The spinal cord in a neonate is believed to be tethered if it is found at or below what lumbar vertebra?
A. L_1 **B.** L_2
C. L_3 **D.** L_4
E. L_5 *(AUA 95-10)*

127. Of the following informations, which is least commonly employed in the decision to correct a varicocele in a 12-year-old male?
A. Testis volume
B. Testis biopsy
C. GnRh stimulation assay
D. Semen quality relative to normal adolescent standards
E. Scrotal discomfort *(AUA 95-14)*

128. Vesicostomy as a temporary diversion is most abused (and used) in the following diagnosis:
A. PUV (posterior urethral valves)
B. PRS (prune-belly syndrome)
C. MMC (myelomeningocele)
D. VUR (vesicoureteral reflux)
E. SCI (spinal cord injury) *(AUA 95-16)*

129. Neonatal circumcision prevents:
A. Cancer of penis
B. Urinary tract infection
C. HIV infection
D. Meatal stenosis
E. Cancer of the cervix *(AUA 95-21)*

130. The mortality rate of neonatal circumcision is:
A. One in 100,000 **B.** One in 250,000
C. One in 500,000 **D.** One in 750,000
E. One in 1,000,000 *(AUA 95-21)*

131. According to Herodotus, circumcision was begun by:
A. Ethiopians **B.** Syrians
C. Jews **D.** Egyptians
E. Phoenicians *(AUA 95-21)*

126 C 127 D 128 D 129 B 130 C 131 D

132. The bacteria most commonly involved in urinary tract infection in uncircumcised boys is:
A. *Pseudomonas*
B. *E. coli*
C. *Streptococcus faecalis*
D. *Staphylococcus aureus*
E. *Staphylococcus epidermidis* *(AUA 95-21)*

133. The most common neonatal testicular tumour:
A. Seminoma
B. Mature teratoma
C. Gonadal stromal tumour
D. Yolk sac tumour *(CU 7:1635)*

134. Suspicion of sexual abuse should be considered when vaginal mucosa is bruised or injected, the vaginal opening is dilated to greater than 3 mm in an infant to 7-year-old child or ____ mm in a 7 to 13-year-old child, or the hymen is damaged, showing a V-notch or cleft:
A. 4 **B.** 6
C. 8 **D.** 10 *(CU 7 1627)*

135. The most common etiology of isolated neonatal ascites unassociated with generalised edema:
A. Chylous ascites
B. Gastrointestinal tract anomalies associated with perforation
C. Urinary obstruction and extravasation
D. Blunt abdominal trauma *(CU 7 1638)*

136. Which of the following statement is *not true*?
A. The treatment of furosemide induced neonatal urinary calculi rarely requires surgical intervention
B. Renal vein thrombosis is the most frequently detected neonatal vascular anomaly
C. Surgical thrombectomy is the principal modality of treatment in neonatal renal vein thrombosis
D. Prerenal ARF is the most common cause of renal failure in the neonate *(CU 7 1643-1647)*

137. Which of the following is a *wrong* statement?
A. By seven days in the term infant, plasma creatinine concentration is normally less than 0.5 mg/dl, whereas in preterm infants, levels can remain as high as 1 mg/dl for the first month of life

132 B 133 C 134 A 135 C 136 C 137 A

B. In the oliguric neonate (urine flow less than 1 ml/kg/hour), the fraction of filtered sodium in the urine (FENa) less than 2.5 per cent suggests a prerenal condition, whereas in the older infant or child, a value below 1 per cent is consistent with prerenal oliguria

C. An urine specific gravity greater than 1.020 generally rules out a serious abnormality of urinary concentration in neonates and children

D. The most common cause of hypercalciuria in neonates is the administration of calciuric drugs, such as furosemide and glucocorticoids, which are used in the management of bronchopulmonary dysplasia *(CU 7 1658-1661)*

138. Find out the erroneous statement from the following:

A. The most common cause of glucosuria in hospitalised infants is intravenous infusion of dextrose at rates exceeding the tubular reabsorptive threshold

B. Maternal administration of indomethacin can result in prolonged renal insufficiency and oliguria in the neonate

C. Eumorphic RBCs in urine are most often associated with glomerular bleeding

D. A urinary calcium excretory rate of more than4 mg/ kg/day is abnormal in children *(CU 7 1661-1673)*

139. Eighty per cent of pediatric patients with systemic lupus erythematosus are:

A. Female **B.** Male

C. Of Indian origin **D.** Born to surrogate mothers *(CU 7 1676)*

140. The most common anatomic cause of secondary vesicoureteric reflux is:

A. Anterior urethral valves

B. Posterior urethral valves

C. Non-neurogenic neurogenic bladder

D. Neurogenic bladder *(CU 7 1862)*

141. In the medical management of vesicoureteral reflux which of the following is recommended for children up to six weeks of age?

A. Nitrofurantoin

B. Cephalosporins

C. Trimethoprim

D. Amoxicillin or ampicillin *(CU 7 1880)*

138 C 139 A 140 B 141 D

142. Female epispadias is a rare congenital anomaly, occurring in one in:
A. 400 **B.** 50,000
C. 484,000 **D.** 104,000 *(CU 7 1978)*

143. The 'Laws of 15' has been described for:
A. Bladder exstrophy **B.** Enuresis
C. Ureteroceles **D.** Spermatogenesis *(CU 7 2055)*

144. Match the following types of anuresis based on cystometric and EEG observations:

A. A stable bladder with no EEG response during an enuretic episode	1. Type IIb
B. An unstable bladder with no EEG response during an enuretic episode	2. Type I
C. A stable bladder with an EEG response during an enuretic episode	3. Type IIa

(CU 7 2058)

145. Not a *true* statement:
A. DDAVP should not be used as a first line therapy in treating nocturnal enuresis
B. Behaviour modification should be considered as the first line approach to the management of enuresis
C. Conditioning therapy using an urinary alarm appears to be the most effective therapy available for nocturnal enuresis
D. It has been found that obstructive sleep apnea presents as or be associated with noctural anuresis in adults as well as children in as many as 90 per cent of times
(CU 7 2062-2073)

146. Micropenis is defined as a normally formed penis that is at least 2.5 standard deviations below the mean in size. Accordingly the minimum acceptable penile length of a 10 to 11 year old boy will be ____ when his normal mean length ± standard deviation is 6.4 ± 1.1 cm:
A. 3.7 cm **B.** 9.3 cm
C. 5.0 cm **D.** 4.8 cm *(CU 7 2120-2123)*

147. Find out the *wrong* statement:
A. Clitoral index is obtained by multiplying the breadth of the glans by its length
B. By 3 years of age 90 per cent of the foreskins (prepuce) are retractable

142 C 143 B 144 A:3 B1 C2 145 D 146 A 147 C

C. In general, the penis of a term newborn should be at least 2.5 cm long
D. Correction is unnecessary if the penile rotation is less than 60 to 90 degrees from the midline *(CU 7 2120-2125)*

148. Its less severe forms have been termed bifid scrotum, doughnut scrotum, prepenile scrotum, and shawl scrotum:
A. Scrotal engulfment **B.** Ectopic scrotum
C. Scrotal hypoplasia *(CU 7 2129)*

149. Treatment of this type of testicular tumour in children is simple orchiectomy:
A. Yolk sac carcinoma **B.** Leydig cell tumour
C. Seminoma **D.** Teratocarcinoma *(CU 7 2247)*

150. The highest concentration of AFP is noted during the ___ weeks of gestation that gradually declines so that at one year after birth AFP is detected only at low levels (< 40 ng/ml).
A. 10 – 11 **b.** 12 – 14
C. 14 – 16 **D.** 16 – 18 *(CU9-906)*

151. Collectively referred under the term chordee without hypospadias are ___ types of congenital curva-ture of penis.
A. IV and V **B.** I, II, and III
C. II and IV **D.** Only V *(CU9-1088)*

152. Angiographically, medial fibroplasias demonstrates a typical ___ appearance involving the distal two thirds of the main renal artery and branches.
A. Light bulb **B.** String of beads
C. Moth eaten **D.** Shaw edge *(CU9-1159)*

153. Rather crudely known as 'girlie disease':
A. Perimedial fibroplasias
B. Intimal fibroplasias
C. Medial fibroplasia
D. Fibromuscular hyperplasia *(CU9-1160)*

154. ____ is the primary site of synthesis of angioten-sinogen, which is not stored but secreted directly after production.
A. Liver **B.** Adrenal medulla
C. Renal medulla **D.** Hypothalamus *(CU9-1161)*

155. Almost all vascular effects of angiotensin II, inc-luding vasoconstriction, aldosterone release, and beta-adrenergic stimulation, are mediated by the ___ angiotensin II receptor subtype.

148 A 149 B 150 B 151 B 152 B 153 A 154 A 155 D

A. AT_4 **B.** AT_3
C. AT_2 **D.** AT_1 *(CU9-1163)*

156. ___ remains the gold standard for diagnosing renal arterial disease, and it is the test against which the results of all other tests are compared.
A. CT angiography
B. Intra-arterial angiography
C. MR angiography
D. Duplex ultrasonography *(CU9-1172)*

157. Revasularisation to preserve renal function in isch-emic nephropahy is generally not worthwhile with severe azotemia – serum creatinine level ___ mg/dL.
A. Two **B.** Three
C. Four **D.** Six *(CU9-1175)*

158. In evaluating the results of surgical revascularization for reno-vascular hypertension, most studies have considered patients to be cured if the blood pressure is ____ mm Hg or less post-operatively.
A. 130/80 **B.** 120/70
C. 140/90 **D.** 150/100 *(CU9-1179)*

159. The International Continence Society Committee definition of (2002) of overactive bladder is:
A. Urgency, with or without urge incontinence
B. Urgency with incontinence
C. Urgency without incontinence
D. A + usually with nocturia
E. D+ and frequency *(CU9-2079)*

160. Calyceal diverticula are ____, that are filled with urine.
A. Acquired, secretory urothelium lined eventration
B. Congenitally derived, nonsecretory urothelium lined eventration
C. Most common in patients suffering from TB
D. None of the above *(CU9-1442)*

161. Congenital bladder diverticula have been associated with a number of syndromes except:
A. Menkes **B.** Williams
C. Ehlers-Danlos **D.** Fetal alcohol
E. Isaac *(CU9-2361)*

162. In the human male, neonatal surge in testosterone are observed to peak between ___ months of age. During this period, serum levels rise to 60 times normal prepubertal levels and often reach the adult range.

156 B 157 C 158 C 159 E 160 B 161 E 162 B

A. One and two **B.** Two and three
C. Three and four **D.** Four and five *(CU9-2679)*

163. Dysmelia is a teratogenic effect of therapy with ___.
A. Thalidomide **B.** Bevacizumab
C. Revlimid **D.** Actimid *(CU9-3117)*

164. Urinary calcium excretion in the neonate is most easily assessed by determination of calcium/creatinine ratio (mg/mg) in a ramdom urine sample. In contrast to the older child, in whom a ratio exceeding 0.2 should be considered abnormal, the ratio in the infant receiving breast milk can rise to 0.4 in term infant and ___ in premature infant.
A. 0.6 **B.** 0.8
C. 1.0 **D.** 1.2 *(CU9-3156)*

165. After the first week of life in the neonate, the fractional tubular reabsorption of phosphorus should be greater than 95% in term infant and ___ in preterm infants.
A. Greater than 98% **B.** Lesser than 50%
C. Greater than 75% **D.** Lesser than 65% *(CU9-3156)*

166. The most severe manifestation of prosterior urethral valve (bladder distension, bilateral hydronephrosis, increased renal echogenicity) may be seen as early as ___ weeks in gestation.
A. 10 **B.** 11
C. 12 **D.** 13 *(CU9-3181)*

167. ___ does not appear cystic but is characterized by markedly enlarged, brightly echogenic kidneys.
A. ARPKD (Autosomal recessive polycystic kidney disease)
B. Supernumerary kidney
C. MCDK (multicystic dysplastic kidney disease)
D. Megacalycosis *(CU9-3183)*

168. The most common entity producing a protuberant mass in the perineum of a new born girl is ___.
A. Urethral prolapse
B. Prolapsed ectopic ureterocele
C. Imperforate hymen
D. Periurethral cyst *(CU9-3194)*

169. Management of an imperforate hymen in a neonate is incision and drainage, which is also appropriate for vaginal stenosis. The substance drained is often ___ and may be of suprising volume.
A. Milky white **B.** Hemorrhagic
C. Coffee ground **D.** Serous *(CU9-3194)*

163 A 164 B 165 C 166 D 167 A 168 D 169 A

170. If there are five or more spots (cafe-au-lait macules) each more than ___ mm in diameter in prepubertal patients or six or more spots more than 15 mm in postpubertal children, neurofibromatosis type 1 (Von Recklinghausen's disease) should be suspected.
A. 5 **B.** 10
C. 15 **D.** 20 *(CU9-3207)*

171. Glanular preputial adhesions usually separate before the age of ___ years, but may persist in some boys for longer periods.
A. 3 **B.** 4
C. 5 **D.** 2 *(CU9-3209)*

172. An atypical presacral dimple may indicate spina bifida or cord tethering if the dimple if off center, more than ___ cm from the anal verge at birth or deeper than 0.5 cm.
A. 2.5 **B.** 3.5
C. 4.5 **D.** 5.5 *(CU9-3210)*

173. The combination of ___ or more congenital midline lesion like port-wine stain, subcutaneous lipoma, dermal sinuses, tails, and localized hypertrichosis, suggest occult spinal abnormalities.
A. 1 **B.** 2
C. 3 **D.** 4 *(CU9-3210)*

174. In the work-up of suspected renovascular hyperten-sion, ___-enhanced MR angiography is a noninvasive modality with comparable accuracy to digital sub-traction angiography.
A. Technetium **B.** Gallium
C. Indium **D.** Gadolinium

175. The Schwartz formula for the estimation of glome-rular filtration rate, height (cm) X 0.45/creatinine (mg/dL), is applicable to ___.
A. Age < 18 months
B. Age > 18 months and weight < 70 Kg
C. Male with weight > 70 Kg
D. Age > 18 months and weight < 50 Kg *(CU9-3230)*

176. Future hypertension (at least a 10% to 20% risk) in children with gross pyelonephritic nephropathy (reflux nephropathy) occurred when renal scarring was ___.
A. Segmental **B.** Focal
C. Unilateral **D.** Bilateral
E. Independent of the degree of scarring *(CU9-3259)*

177. ____ is the most common cause of viral hemorrhagic cystitis in children.

170 A 171 B 172 A 173 B 174 D 175 A 176 E 177 A

A. Adenovirus **B.** Polyomavirus
C. Herpes *simplex* **D.** Herpes *zoster* *(CU9-3263)*

178. The most common cause of micropenis is _____.
A. Hypogonadotropic hypogonadism
B. Hypergonadotropic hypogonadism
C. Robinow's syndrome
D. Idiopathic *(CU9-3752-53)*

179. The following statement about cryptorchidism is not true.
A. Birth weight alone is the principal determinant of cryptorchidism at birth and at 1 year of life, independent of the length of gestation.
B. Cryptorchidism may be acquired in a significantly greater number of cases, in large part because of retractile testes (Barthold and Gonzalez, 2003).
C. Approximately 70% to 77% of cryptorchid testes will spontaneously descended, usually by 3 months of age.
D. By 1 year of age, the incidence of cryptorchidism declines to about 2% and remains constant throughout adulthood.
E. Definitive treatement of an undescended testis should take place between 6 and 12 months of age. *(CU9-3763-64-65-75)*

180. _____ between 2 and 3 months of age of a neonate with cryptorchidism appears to be critical for male fertility.
A. Total number of germ cells
B. Total number of Leydig cells
C. Tranformation of gonocytes into Ad spermatogonia
D. Total number of sertoli cells *(CU9-3772)*

181. Prevalence of carcinoma *in situ* is ___ in patients with cryptorchidism.
A. 1.7 % **B.** 40%
C. 13.5% **D.** 3.8% *(CU9-3773)*

182. In the hormonal management of cryptorchidism, the most effective treatment was demonstrated to be a total dose of at least 10,000 IU of exogenous hCG to achieve maximal stimulation of the Leydig cells and avoid complication associated with doses exceeding 15,000 IU. A typical treatment schedule is _____ IU/m^2 given by intramuscular injection twice a week for four weeks.
A. 1000 **B.** 1200
C. 1500 **D.** 1700 *(CU9-3775)*

178 A 179 D 180 C 181 A 182 C

183. In the hormonal management of undescended testis, exogenous GnRH has the advantage of nasal spray administration, and an effective dose the stimulating LH ___ mg/day for four weeks.
A. 1.2 **B.** 3.2
C. 5.2 **D.** 8.2 *(CU9-3775)*

184. Contralateral testicular hypertrophy, defined as a testis greater than 2 mL, or testicular length greater than _____ predicted monorchia in over 90% cases.
A. 1 cm **B.** 2 cm
C. 3 cm **D.** 4 cm *(CU9-3782-83)*

185. All of the following statements are true except:
A. The vas deferens was demonstrate nonunion with any cryptorchid testis and therefore, when blind ending, is not confirmative of a vanishing testis.
B. Most simple hydroceles found at birth deserve long-term observation, and most resolve during the first two years of life.
C. Aspiration of infant hydroceles is contraindicated because of the risk of infection, which in the cases of a patent processus, would extend into the peritoneal cavity.
D. The cremasteric reflex should be present in patients with torsion of the spermatic cord, and its absence is highly suggestion of epididymitis.
E. Prenatal torsion of spermatic cord is typified by the finding at delivery of a hard, nontender testis fixed to the overlying scrotal skin that is commonly discolored by underlying hemorrhage necrosis. *(CU9-3784-88-92)*

186. Paraurethral cysts in a newborn:
A. Represent a dilatation of Skene's duct
B. Represent a dilatation of Gartner's duct
C. Frequently self limited and often rupture spon-taneously.
D. A and C *(CU9-3842)*

187. In neuroblastoma (the most common extracranial solid tumor of childhood), low risk are stage _____ .
A. I, II **B.** I, II, and III
C. I, II, and IV-S **D.** I only *(CU9-3827)*

188. Usually, the safest approach for advanced childhood neuroblastomas is to:
A. Advance intensive chemotherapy
B. Intraoperative radiotherapy
C. Defer tumor resection until after initial chemotherapy
D. Give biologic modifies such as 13-cis-Retinoic acid
(CU9-3876)

183 A 184 B 185 D 186 D 187 C 188 C

189. _____ rhabdomyosarcomas generally demonstrate embryonal or botryoid embryonal histology and have an excellent prognosis.

A. Vaginal **B.** Uterine
C. Urinary bladder **D.** Prostate *(CU9-3884)*

190. _____ is the most common renal tumor in infancts, with a mean age at diagnosis of 3.5 months.

A. Clear cell sarcoma
B. Rhabdoid tumor
C. Wilms' tumor
D. Congenital mesoblastic nephroma
E. Renal cell carcinoma *(CU9-3898)*

191. Schiller-Duval bodies are the characteristic histologic finding in _____ .

A. Yolk cell tumors **B.** Germ cell tumors
C. Neuroblastomas **D.** Rhabdomyosarcomas *(CU9-3901)*

192. Most pediatric post-traumatic urinomas are asympt-omatic and have a spontaneous resolution rate approaching _____ %.

A. 96 **B.** 85
C. 75 **D.** 65 *(CU9-3932)*

193. Traumatic bladder neck lacerations in children are approximately _____ times more likely to extend through bladder neck compared with adults.

A. Two **B.** Four
C. Eight **D.** Ten *(CU9-3938)*

189 A 190 D 191 A 192 B 193 A

13 Renal Failure and Medicorenal Disease

1. **Determination of the clearance of which of the following by the kidney is the gold standard for GFR measurement?**
   A. Inulin **B.** Creatinine
   C. ^{125}I idothalamate **D.** Para-aminohippurate *(CU 2045)*

2. **The term 'renal reserve' refers to the ability to ____ GFR with protein ingestion:**
   A. Increase **B.** Decrease *(CU 2046)*

3. **Reduction of urine flow rate to values below _____ is not compatible with the maintenance of solute balance of the body:**
   A. 300 ml/day **B.** 400 ml/day
   C. 500 ml/day **D.** 600 ml/day *(CU 2046)*

4. **Reduction of urine flow rate to values below ____ is referred to as oliguria:**
   A. 200 ml/day **B.** 300 ml/day
   C. 400 ml/day **D.** 500 ml/day *(CU 2046)*

5. **Under normal circumstances, the kidney can maintain normal renal blood flow and GFR down to a mean arterial pressure of:**
   A. 40 mm Hg **B.** 50 mm Hg
   C. 60 mm Hg **D.** 70 mm Hg *(CU 2046)*

6. **Aminoglycoside-associated acute tubular necrosis (ATN) is typically ____; usually develops after 5 to 7 days of therapy:**
   A. Nonoliguric **B.** Oliguric
   C. Indeterminate **D.** Variable *(CU 2048)*

7. **The major site of injury in ischaemic ATN is the:**
   A. Thick ascending limb of Henle
   B. Distal convoluted tubule
   C. Proximal tubule
   D. Collecting ducts *(CU 2049)*

8. **Acute tubular necrosis is usually associated with an:**

1 A 2 A 3 C 4 D 5 C 6 A 7 C 8 C

A. Hypertonic urine **B.** Hypotonic urine
C. Isotonic urine *(CU 2050)*

9. All of the following electrolyte imbalance occurs with acute renal failure *except:*
A. Hyperkalemia **B.** Hypermagnesemia
C. Hyperphosphatemia **D.** Hypercalcemia *(CU 2051)*

10. Generally, proteinuria exceeding 3.5 gm/day (normalised per 1.73 m^2 body surface area) suggests ____, whereas more modest degrees of proteinuria (i.e. 1 to 2 gm/day) suggest____:
A. Glomerular disease; tubulointerstitial disease
B. Tubulointerstitial disease; glomerular disease *(CU 2055)*

11. 'Nil disease' is:
A. Minimal change disease
B. Focal and segmental glomerulosclerosis
C. Analgesic nephropathy
D. Berger's disease *(CU 2055)*

12. All of the following are indicators of poor prognosis in a case of IgA nephropathy *except:*
A. Young age at onset
B. Heavy, consistent proteinuria
C. Abnormal renal function at presentation
D. Hypertension *(CU 2066)*

13. The most characteristic renal functional lesion in individuals with haemoglobin S gene is:
A. Papillary necrosis
B. Loss of the concentrating ability of the kidney
C. CRF
D. Hyperfiltration glomerulosclerosis *(CU 2069)*

14. Renal infarction characteristically causes a rapid rise in the serum level of —, which returns to normal in 3 to 4 days:
A. Lactate dehydrogenase
B. Alkaline phosphatase
C. Amylase
D. Aspartate aminotransferase *(CU 2069)*

15. Renal arteriovenous fistulas presenting as distinct, tortuous, coiled vascular channels grouped in clusters, with multiple communications between arteries and veins are:
A. Congenital fistulas **B.** Acquired fistulas *(CU 2070)*

9 D 10 A 11 A 12 A 13 B 14 D 15 A

16. Percutaneous needle biopsy of the kidney accounts for over — per cent of acquired arteriovenous fistulas, particularly in patients with nephrosclerosis and arterial hypertension:
A. 10 **B.** 20
C. 30 **D.** 40 *(CU 2070)*

17. The normal composition of urine protein is:
A. 30 to 40 per cent Tamm-Horsfall protein, 30 per cent serum globulin, and 30 per cent serum albumin
B. 30 to 40 per cent serum albumin, 30 per cent serum globulin, 40 per cent tissue proteins
C. 50 to 60 per cent serum albumin, 30 per cent Tamm-Horsfall protein, 20 per cent serum globulin
D. 75 per cent Tamm-Horsfall protein, 20 per cent serum albumin, 5 per cent serum globulin *(CU 2073)*

18. Creatinine is produced at a constant rate by muscle cells from the breakdown of creatine at a rate of approximately:
A. 5 mg/kg/day **B.** 10 mg/kg/day
C. 15 mg/kg/day **D.** 20 mg/kg/day *(CU 2076)*

19. One gram of phenacetin per day in combination with other analgesics for 1 to 3 years or a total of ____ of phenacetin alone is considered the minimal amount that will cause nephropathy:
A. 1 kg **B.** 2 kg
C. 3 kg **D.** 4 kg *(CU 2077)*

20. All of the following are the mechanisms by which NSAIDs can affect renal function *except:*
A. Decreased synthesis of renal vasoconstrictive prostaglandins
B. Allergic interstitial nephritis
C. Impaired renin secretion
D. Enhanced tubular water and sodium reabsorption *(CU 2077)*

21. Although all NSAIDs have been implicated as causes of acute renal failure, ___ may have less deleterious effects and, thus, may be the agent of choice for patients at risk of renal insufficiency:
A. Sulindac **B.** Diclofenac sodium
C. Diclofenac potassium **D.** Dipyrone *(CU 2077)*

22. Polyuria is generally defined as a urine volume of — ml or more per day:
A. 2000 **B.** 2500
C. 3000 **D.** 3500 *(CU 2078)*

16 D 17 B 18 D 19 B 20 A 21 A 22 B

23. Acquired form of nephrogenic diabetes insipidus may be caused by all of the following *except:*
A. Obstructive uropathy **B.** Sickle cell disease
C. Potassium depletion **D.** Calcium depletion
E. Chronic pyelonephritis **F.** Analgesic nephritis

24. In a patient with acute renal failure, the calorie to nitrogen ratio of the hyperalimentation solution should be:
A. 150:1 **B.** 200:1
C. 400:1 **D.** 800:1
E. 1500:1 *(AUA 95-3)*

25. The mortality rate associated with oliguric ATN is 60 to 80 per cent, in comparison with about _____ per cent for nonoliguric ATN:
A. 20 **B.** 40
C. 90 **D.** 100 *(CU 7 318)*

26. It has been recognised that treatment with nonsteroidal anti-inflammatory drugs, an induced state of _____, can precipitate ARF in settings of prerenal azotemia:
A. Reduced cyclo-oxygenase activity
B. Increased cyclo-oxygenase activity
C. Reduced intrinsic prostaglandin activity
D. Ischaemia-reperfusion *(CU 7 322)*

27. _____ is probably the most common and most dangerous electrolyte abnormality seen with ARF:
A. Hyperphosphatemia **B.** Hyperkalemia
C. Hypermagnesemia **D.** Hypocalcemia *(CU 7 325)*

28. The most widely employed method for treating ARF is:
A. Continuous arteriovenous hemofiltration and hemodialysis (CAVHD)
B. Peritoneal dialysis
C. Hemodialysis
D. Continuous venovenous hemofiltration (CVVH) *(CU 7 326)*

29. CRF develops insidiously, and the onset of symptoms occurs only when GFR is ____ per cent of normal:
A. 10 **B.** 20
C. 30 **D.** 40 *(CU 7 328)*

30. _____ is thought to be the most common form of glomerulonephritis in the world, at least in developed countries, where postinfectious glomerulonephritis is uncommon:

23 D 24 C 25 A 26 A 27 B 28 C 29 C 30 B

A. Nil disease
B. Berger's disease
C. Poststreptococcal glomerulonephritis
D. Membranoproliferative glomerulonephritis *(CU 7 329)*

31. Renal vein thrombosis occurs in 15 per cent to 20 per cent of patients with the nephrotic syndrome, but in up to 50 per cent of those with:
A. Nil disease
B. Nephritis syndrome
C. Berger's disease
D. Membranous glomerulonephritis *(CU 7 450)*

32. Not a true statement:
A. Gross hematuria in patients with IgA nephropathy usually appears during an acute infection
B. In patients who develop nephrotic syndrome with Henoch-Schönlein purpura approximately 50 per cent will develop end-stage renal disease within 10 years
C. Hemolytic-uremic syndrome is the most frequent cause of ARF in children
D. Prognosis of hemolytic-uremic syndrome is poor in patients who have diarrhoeal forms of the disease, are more than one year of age, or have oliguria, hypotension, or severe peripheral nervous system disease *(CU 7 1675)*

33. Find out the wrong statement from the following:
A. Recurrent or permanent microhematuria seldom occur in a familial form
B. Idiopathic membranous nephropathy is rarely seen in children
C. Renal glucosuria is defined by the presence of glucosuria when the plasma glucose is less 120 mg/dl
D. Although older children may have less risk of renal scarring from infection than those younger than five years, vulnerability for scarring persists until puberty (10–15 years old) *(CU 7 1676-1684)*

34. Urinary sediment finding of eosinophils is sugge-stive of the diagnosis of ___.
A. Prerenal/obstruction
B. Acute glomerulonephritis/vasculitis
C. Acute Tubular necrosis
D. Acute interstitial nephritis *(CU9-1134)*

31 D 32 D 33 A 34 D

35. In practice, once the GFR decreases less than 60 ml/min/1.73 M^2 for ___ months or more, patients are classified as having chronic kidney disease.

A. Six **B.** Five
C. Four **D.** Three *(CU9-1348)*

36. In the oliguric neonate (urine flow <a mL/Kg/hr), fractional excretion of sodium (FENa) less than ___% suggests a prerenal condition, whereas in the older infants or child, a value below 1% is consistent with prerenal oliguria.

A. 1.5 **B.** 2.0
C. 2.5 **D.** 3.0 *(CU9-3154)*

37. Renal failure develops in patients with adult polycystic kidney disease even only ___% nephrons develop cysts.

A. 5 **B.** 10
C. 7 **D.** 1 *(CU9-3325)*

38. A number of investigators have found that the cysts of acquired renal cystic disease ___ after renal transplantation.

A. Regress **B.** Disappear
C. Increase in number **D.** Bleed *(CU9-3354)*

39. RCC occurring in ESRD is different biologically in a matter of ways from classic RCC. Pick-up the odd statement.

A. Age at occurrence average 5 years younger in patients with ESRD
B. The male-to-female ratio is significantly greater in ESRD patients with RCC than with general population with RCC (7:1 and 2:1 respectively)
C. The incidence of RCC in ESRD is 3 to 6 times that of general population and may be as high as 10 times the incidence in blacks.
D. If no RCC had developed before 10 years of chronic dialysis, development after 10 to 15 years was unusual. *(CU9-3352)*

40. The Bretan scale evaluates overall renal allograft function based on specific renal isotopic criteria. The criteria-delayed peak accumulation and delayed clearance comes under group _____ excretion: and the predictive dialysis requirement of this group for the 1st week post-transplant is 19%. (SU 16-553)

A. 1 **B.** 2
C. 3 **D.** 4
E. 5 *(CU9-3352)*

35 D 36 C 37 D 38 A 39 D 40 C

14 Urolithiasis

1. **Epitaxy is:**
   A. Haematuria due to spontaneous rupture of renal artery aneurysm
   B. The deposition of one type of crystal upon the surface of another in formation process of renal calculus
   C. Spontaneous intraperitoneal rupture of urinary bladder
   D. Haemorrhage from Little's area *(CU 2096, CMC)*

2. **The transit time of urine from the normal kidney to the normal bladder is estimated to be:**
   A. 5 to 10 minutes **B.** 5 to 10 seconds
   C. 20 to 60 seconds **D.** 1 to 3 minutes *(CU 2096)*

3. **Matrix content of a given stone varies, but most solid urinary calculi have matrix content of about ____ per cent by weight:**
   A. 15 **B.** 10
   C. 6 **D.** 3 *(CU 2097)*

4. **It increases the solubility of some components of urine, especially uric acid:**
   A. Creatinine **B.** Creatine
   C. Urea **D.** Alanine *(CU 2099)*

5. **Investigators have implicated trace metals in the inhibition of urinary stone formation, especially the calcigerous type of stone. One of the following seems to be the most frequently mentioned of these substances:**
   A. Zinc **B.** Magnesium
   C. Gold **D.** Aluminium *(CU 2099)*

6. **When a stone is impacted in the ureter, the most painful area:**
   A. Is located just proximal to the area of impaction
   B. Is located several centimetres distal to the site of impaction
   C. Is typically felt in the whole ureter line
   D. May be located around the impaction of the calculus
   (CU 2102)

1 B 2 A 3 D 4 C 5 A 6 D

7. **Urine analysis in most patients with urinary lithiasis reveals the presence of microscopic or gross haematuria. Some ____ per cent of patients do not demonstrate haematuria, especially when the calculus has created complete obstruction:**
   A. 10 **B.** 15
   C. 20 **D.** 25 *(CU 2103)*

8. **Stones that are most radiopaque and have a density like that of bone:**
   A. Calcium phosphate **B.** Calcium oxalate
   C. Cystine **D.** Magnesium ammonium phosphate
   (CU 2103)

9. **Calcium oxalate calculi must be at least ____ mm thick to appear on most radiographs:**
   A. One **B.** Two
   C. Three **D.** Four
   E. Five *(CU 2103)*

10. **For cystine calculi, a degree of thickness approximating — is necessary for the stone to be visualised at all on radiographs:**
    A. 3 to 4 mm **B.** 1 to 2 mm
    C. 5 to 7 mm **D.** 8 to 9 mm *(CU 2104)*

11. **Studies on urodynamics indicate that an increase in diuresis generally _____ the rate of ureteral peristalsis:**
    A. Increases **B.** Reduces
    C. Flattens *(CU 2108)*

12. **Out of the following methods of stone analysis, which were best for practical use in the hospital laboratory?**
    A. Instrumental (Infrared spectroscopy; thermoanalytic; radiographic crystallography; scanning electron microscopy; transmission electron microscopy)
    B. Optical (Binocular dissection microscopy with petrographic microscopy)
    C. Chemical (Qualitative 'spot' tests; quantitative analysis; chromatographic and autoanalyser methods) *(CU 2109)*

13. **The average male excretes approximately ____ mg of uric acid per day in a volume of slightly over a litre:**
    A. 200 **B.** 300
    C. 400 **D.** 500
    E. 600 *(CU 2114)*

7 A 8 A 9 B 10 A 11 B 12 C 13 C

14. The initial and immediate therapy for patients with uric acid lithiasis involves:
- **A.** Advising the patient to consume a diet that limits protein intake to less than 90 gm a day
- **B.** Giving medications to alkalize the urine to a level between pH 6.5 and 7.0
- **C.** Advising the patient to take enough fluids to have urinary output in excess of 1500 ml or even 2000 ml per day
- **D.** Advising allopurinol 300 to 600 mg per day *(CU 2116)*

15. Cystinuria is an inherited defect in renal tubular reabsorption of four amino acids:
- **A.** Cystine, omithine, alanine, guanine
- **B.** Cystine, arginine, lysine, methionine
- **C.** Cystine, ornithine, lysine, arginine
- **D.** Leucine, isoleucine, cystine, methionine *(CU 2117)*

16. Normal individuals in general excrete ____ of cystine in urine per day:
- **A.** Less than 100 mg **B.** Less than 50 mg
- **C.** More than 200 mg **D.** More than 400 mg *(CU 2117)*

17. The basic abnormality in the formation of struvite calculi is maintenance of urinary pH:
- **A.** Lesser than 6.4 **B.** Greater than 7.2
- **C.** Greater than 7.0 **D.** Greater than 5.4 *(CU 2118)*

18. Which of the following organisms does not produce urease:
- **A.** *Pseudomonas* **B.** *Mycoplasma*
- **C.** *E. coli* **D.** *Staphylococcus* *(CU 2120)*

19. Twice daily irrigation with 20 to 50 ml of solutions of 0.25 or 0.5 per cent _____ greatly reduce struvite encrustation and calculi formation in catheterised patients of neurogenic bladder:
- **A.** Povidone-iodine **B.** Hydrogen peroxide
- **C.** Dakin's fluid **D.** Acetic acid
- **E.** Citric acid *(CU 2121)*

20. Solutions 'G' and 'M' developed by Suby for dissolving struvite calculi are composed of:
- **A.** Citric acid monohydrate, anhydrous magnesium oxide, anhydrous sodium carbonate, distilled water
- **B.** Rinacidin, acetic acid, citric acid monohydrate, distilled water
- **C.** Anhydrous magnesium oxide, anhydrous magnesium phosphate, distilled water
- **D.** Citric acid monohydrate, anhydrous magnesium ammonium phosphate, distilled water and hemiacridin *(CU 2121)*

14 C 15 C 16 A 17 B 18 C 19 D 20 A

21. A patient of hypercalciuria on a normal calcium diet comes under which type of absorptive hypercalciuria:
A. Type I **B.** Type II
C. Type III **D.** Type IV *(CU 2123)*

22. Vitamin D_3 ____ require parathyroid hormone to be active on intestinal mucosal cells:
A. Does require **B.** Does not require *(CU 2126)*

23. The half-life of serum parathyroid hormone is believed to be about:
A. 2 minutes **B.** 20 minutes
C. 20 hours **D.** 2 hours *(CU 2126)*

24. The upper limit of normal serum calcium levels for most humans is at or below:
A. 9.6 mg/dl **B.** 6.9 mg/dl
C. 10.2 mg/dl **D.** 10.8 mg/dl *(CU 2126)*

25. Parathyroid crisis usually occurs when the serum calcium content approaches a level of 17 mg/dl or higher. It is characterised by rapid pulse, progressive lethargy, nausea, vomiting, abdominal discomfort, and azotemia. When the serum calcium level reaches ___, respiratory distress, renal failure, and coma develop:
A. 19 mg/dl **B.** 20 mg/dl
C. 21 mg/dl **D.** 22 mg/dl *(CU 2127)*

26. All of the following drugs resolve hypercalcemia *except:*
A. Furosemide **B.** Ethacrynic acid
C. Corticosteroids **D.** Vitamin D
E. Mithramycin **F.** Calcitonin
G. Estrogens **H.** Inorganic phosphates
I. Inorganic sulfates *(CU 2128)*

27. Which type of renal tubular acidosis (RTA) form renal stones?
A. Type I **B.** Type II
C. Type III **D.** Type IV
E. Type I and Type III *(CU 2128)*

28. Patients with regional ileitis, colitis and postoperative intestinal bypass have been demonstrated to excrete excessive amount of:
A. Calcium in the urine **B.** Cystine in the urine
C. Oxalate in the urine **D.** Uric acid in the urine
(CU 2130, CMC)

29. Matrix calculi are found predominantly in individuals with infections due to urease-producing organisms. Which species are especially likely to be associated with matrix calculi?

21 B 22 B 23 B 24 C 25 B 26 D 27 A 28 C 29 B

A. *Pseudomonas* **B.** *Proteus*
C. *Staphylococcus* **D.** *Klebsiella* *(CU 2134)*

30. Radiolucent renal calculi are:
A. Uric acid, matrix, xanthine, 2, 8-hydroxyadenine
B. Uric acid, cystine, triamterene, ammonium acid urate
C. Matrix, silicate, xanthine, uric acid, phosphate
D. Whewellite, Weddellite, Burshite, Struvite, Whit-lockite, uric acid
(CU 2135)

31. There are several factors that influence choice of treatment for ureteral calculi, e.g. duration of symptoms, size of the calculus, renal function status, degree of impaction, etc. if a stone has not moved downward within a period of ____, watchful waiting should be abandoned and other methods of treatment should be instituted:
A. 1 week **B.** 2 weeks
C. 3 weeks **D.** 4 weeks
E. 6 weeks *(CU 2139)*

32. The most accurate and certain means of diagnosing vesical calculi remains the:
A. Roentgenographic study
B. Sounding with a urethral dilator
C. Cystoscopic examination
D. CT scanning *(CU 2141)*

33. Generally, stones in the prostate are composed of calcium phosphate. True prostatic calculi are composed solely of ___ and carbonate:
A. Whewellite **B.** Weddellite
C. Brushite **D.** Whitlockite *(CU 2142)*

34. Which of the following parameters remain the absolute contra-indication to extracorporeal shock wave lithotripsy?
A. Cardiac pacemaker and renal artery calcification
B. Pregnancy and uncontrolled coagulation parameters
C. Severe orthopaedic deformities and serum creatinine more than 3 mg/dl
D. Children and obstruction distal to stone *(CU 2164)*

35. Which of the following types of stones, does not fragment readily with ESWL?
A. Calcium phosphate dihydrate
B. Calcium oxalate dihydrate
C. Uric acid stones
D. Small cystine stones *(CU 2165)*

30 A 31 B 32 C 33 D 34 B 35 A

36. The most common site of stone fragment retention after ESWL is:
A. Ureterovesical junction
B. Pelviureteric junction
C. Lower calyx
D. Prostatic urethra *(CU 2165)*

37. Which of the following lithotriptors has the advantage of being truly anaesthesia-free with no general, spinal, epidural, or local anaesthesia, or sedoanalgesia needed:
A. Electromagnetic **B.** Piezoelectric
C. Microexplosive **D.** Laser *(CU 2166)*

38. Steinstrasse is:
A. A 'stone street' when a series of fragments line up in the ureter like a logjam
B. The name of the technique of placing a stent in the ureter after ESWL
C. The procedure of choice for removal of retained stone fragments after three months of extracorporeal shock wave lithotripsy
D. The application of PCNL after a failed ESWL *(CU 2169)*

39. In general, one minute fluoroscopy exposure time at 90 kV and 3.0 mA delivers approximately:
A. 1 rad **B.** 2 rads
C. 3 rads **D.** 4 rads
E. 5 rads *(CU 2170)*

40. The first percutaneous nephroscomy done for specific purpose of removing a kidney stone was performed by Fernstrom and Johannson in:
A. 1967 **B.** 1986
C. 1976 **D.** 1989 *(CU 2183)*

41. Extravasation of the irrigation fluid is a complication of percutaneous stone removal. Most adults in otherwise good health can absorb ____ ml of extravasated normal saline without difficulty:
A. 250 **B.** 750
C. 1000 **D.** 1500 *(CU 2192)*

42. Endoscopically, a renal papilla appears:
A. As star-shaped, deep red, nonfriable epithelium
B. As cylinder, pink, with dilated capillaries on it
C. As a clubbed structure, red, pulsatile
D. As a rounded cone, with a pink, easily friable epithelium *(CU 2197)*

36 C 37 B 38 A 39 C 40 C 41 C 42 D

43. This anatomic landmark within the lateral ureteral lumen near the ureteropelvic junction usually signifies the close proximity of the renal pelvis endoscopically:
A. Visibility of a lip of ureteral mucosa
B. Narrowing of the ureteral lumen
C. Thinning of the wall of the ureter looking almost transparent
D. Sudden change in the angle in the course of the ureter
(CU 2198)

44. Ureteral dilation to ____ is sufficient to allow passage of the operating instruments, and thus for all available experimental and clinical evidence suggests that dilation to this size has no detrimental effect on the structure or function of the orifice:
A. 8 Fr. or 9 Fr. **B.** 10 Fr. or 11 Fr.
C. 12 Fr. or 13 Fr. **D.** 14 Fr. or 15 Fr. *(CU 2208)*

45. Subacute method of dilation of the ureter for ureteroscopy is:
A. A two-stage procedure
B. Dilating with cone-shaped metal bougies
C. Dilation done over a preplaced guidewire
D. Dilation done with flexible fascial dilators

46. A balloon dilating catheter for ureteroscopy with maximum inflation pressure of — atmospheres is usually sufficient for dilation of normal ureters:
A. 5 **B.** 10
C. 15 **D.** 20 *(CU 2212)*

47. Generally, a ____ per cent solution of radiographic contrast material is used to inflate the balloon of ureteral balloon dilator in order for it to be visible fluoroscopically:
A. 25 **B.** 50
C. 75 **D.** 100 *(CU 2214)*

48. The most severe complication of ureteropyeloscopy is:
A. Ureteric perforation **B.** False passage
C. Avulsion **D.** Infection
E. Stricture formation *(CU 2225)*

49. All of the following complications of ureteroscopy can be managed conservatively *except:*
A. Ureteric stricture
B. Avulsion of the lower third of the ureter
C. Ureteral perforation
D. Infection *(CU 2226)*

43 A 44 D 45 A 46 C 47 B 48 C 49 B

50. Included in the differential diagnosis of radiolucent filling defects in the renal pelvis and ureter:
A. Transitional cell carcinoma
B. Blood clot
C. Uric acid calculi
D. Air
E. Papillary necrosis and fungal ball
F. All of the above *(CU 2251)*

51. Perinephric abscess is most commonly associated with disruption of a corticomedullary intranephric renal abscess. The most common symptom of a retroperitoneal abscess is:
A. Fever **B.** Flank pain
C. Palpable flank mass **D.** Pyuria *(CU 2256)*

52. Perinephric abscess is a life-threatening entity. Left undrained, despite antibiotic administration, the mortality rate approaches:
A. 50 per cent **B.** 60 per cent
C. 70 per cent **D.** 80 per cent *(CU 2257)*

53. Which of the following sclerogent can be used to obliterate renal cysts as an alternative to ethanol?
A. Bismuth phosphate
B. Barium sulphate
C. Calcium megaldrate
D. Meglumin hydrochloride *(CU 2259)*

54. Which of the following statements regarding doing endopyelotomy is *true*?
A. The incision in the ureteropelvic junction is made through the full thickness of the ureter
B. The incision in the UPJ should be full thickness of the ureter, until retroperitoneal fat is clearly seen
C. The incision is made along the posterolateral border of the UPJ and is carried caudally for approximately 1 cm beyond the point of UPJ obstruction
D. There should be rapid extravasation of the contrast material through the incised UPJ when contrast material is instilled via the endoscope
E. All of the above *(CU 2275, CMC)*

55. Endoinfundibulotomy for infundibular stenosis:
A. Should be a single deep cut anywhere along the circumference
B. Should be made at several places along the infundibulum, especially 3 or 4

50 F 51 A 52 D 53 A 54 E 55 B

C. Should be done just over an area of arterial pulsation, avoiding cutting of any vessel, which serves as a landmark of the mouth of infundibulum
D. The incisions are made at several places keeping them along the half outer circumference of the infundibulum *(CU 2271)*

56. The endoincision for proximal ureteral stenosis:
A. Is made along the posterolateral surface of the ureter through the full thickness of the stricture
B. Is made anteriorly through the full thickness of the wall
C. Is made directly medially
D. Is made anterolaterally *(CU 2280)*

57. Overall durable success rates for balloon dilation and endoincision for ureteral strictures are similar:
A. 80 to 90 per cent **B.** 70 to 80 per cent
C. 60 to 70 per cent **D.** 50 to 60 per cent *(CU 2287)*

58. Match the following two columns: The site of endoincision for middle ureteral stricture depends on the exact location of the stricture:

A. Above the iliac vessel crossing	1. Medially
B. Directly overlying the iliac vessels	2. Posterolaterally 3. Anteriorly
C. Below the iliac vessels	4. Anteromedially *(CU 2283)*

59. For the relief of a noncalculous obstruction of the kidney, a coil configuration indwelling ureteral stent is to be selected for a patient of 5 feet 6 inches height knowing well that all stents are measured and labeled by the length of its straight portion. What size stent you will select?
A. 20 cm stent **B.** 22 cm stent
C. 24 cm stent **D.** 26 cm stent *(CU 2296)*

60. Venous bleeding at the time of percutaneous nephrolithotomy is not suggested by:
A. The colour of the blood
B. Demonstration of IV extravasation
C. Aggravation of bleeding when the irrigation is running
D. Cessation of bleeding when the nephrostomy is raised above the flank
E. Demonstration of the contrast medium in the renal vein *(AUA 93-20)*

56 A 57 D 58 A:2, B:3, C:1 59 C 60 B

61. Treatment of venous bleeding during percutaneous nephrolithotomy is by:
A. Immediate open surgery
B. Tamponade the ureter
C. Straight nephrostomy drainage until the bleeding stops
D. Insertion of two way catheter and start of continuous irrigation
E. Plugging the nephrostomy tube and giving a diuretic
(AUA 93-20)

62. Colon injury at the time of percutaneous nephrolithotomy:
A. Is usually recognised when it occurs
B. Usually requires immediate surgery
C. Is relatively common, with most cases resolving spontaneously
D. May resolve with internal stenting and external colon drainage
E. Is relatively common with most cases requiring open repair
(AUA 93-20)

63. Extravasation at the time of percutaneous nephrolithotomy:
A. Is more common when an Amplatz sheath is used
B. Is difficult to recognise when it occurs
C. Will be less threatening if saline is used than glycine
D. Is always an indication for immediate termination of the procedure
E. Is of little significance as long as it is retroperitoneal
(AUA 93-20)

64. Generally accepted indications for percutaneous nephrolithotomy include all but:
A. Stones with obstructed uropathies
B. Large cystine stones
C. Any patient with a nephrostomy tube
D. Large stones
E. When the certainty of the result is important *(AUA 93-20)*

65. Patients with enteric hyperoxaluria are more likely to form stones composed of:
A. Uric acid **B.** Calcium oxalate
C. Hydroxyapatite **D.** Cystine
E. Magnesium ammonium phosphate *(AUA 95-5)*

66. Hyperuricosuria can also cause calcium oxalate stones by:
A. Causing a reduction of monosodium urate
B. Heterogeneous nucleation of calcium oxalate by monosodium urate

61 E 62 D 63 C 64 D 65 B 66 B

C. Inducing hypercalciuria
D. Homogeneous nucleation of calcium oxalate
E. Permissible incrementation *(AUA 95-5)*

67. One of the most important risk factors associated with enteric hyperoxaluria is:
A. Hyperabsorption of calcium in the small bowel
B. Diminished citrate absorption in the terminal ileum
C. Increased colonic absorption of free oxalate
D. Increased absorption of bicarbonate in the ileum
E. Hyperabsorption of oxalate in the jejunum *(AUA 95-5)*

68. The primary abnormality in patients with renal hypercalciuria is considered to be:
A. Hyperabsorption if intestinal calcium
B. Elevation of serum parathyroid hormone levels
C. Increased 1, 25-$(OH)_2$ vitamin D levels
D. Impairment of renal tubular reabsorption of calcium
E. Excessive mobilisation of calcium from bone *(AUA 95-5)*

69. In order to make the diagnosis of renal hypercalciuria, one must identify both:
A. Increased intestinal absorption of calcium and hyperthyroidism
B. Renal leak of calcium with normal intestinal calcium absorption
C. Secondary hyperparathyroidism and renal leak of calcium
D. Hyperparathyroidism and increased intestinal calcium absorption
E. Primary hyperparathyroidism and increased intestinal calcium absorption *(AUA 95-5)*

70. Renal tubular acidosis may be associated with urinary calculi because of:
A. Hyperoxaluria and hypercalcaemia
B. Hypercitraturia and hypercalciuria
C. Hypermagnesuria and hypocitraturia
D. Hypercalciuria and hypocitraturia
E. Hypouricosuria *(AUA 95-5)*

71. The primary defect in absorptive hypercalciuria type I is considered to be:
A. A renal leak of calcium
B. Calcium mobilisation from bone
C. Excessive dietary calcium intake
D. Primary hyperabsorption of intestinal calcium
E. Parathyroid induced hypercalciuria *(AUA 95-5)*

67 E 68 D 69 C 70 D 71 D

72. The laboratory test which would help differentiate primary hyperparathyroidism from renal hypercalciuria would be:
A. Calcium loading test
B. Fasting urinary calcium
C. Serum PTH
D. Serum calcium level
E. 24-hour calcium *(AUA 95-5)*

73. Urinary pH plays an important role in the formation of all the following types of urinary calculi *except:*
A. Uric acid **B.** Cystine
C. Struvite **D.** Calcium phosphate
E. Calcium oxalate *(AUA 95-5)*

74. The most appropriate initial medical therapy to treat patients with gouty diathesis would be:
A. Sodium alkali **B.** Allopurinol
C. Thiazide **D.** Sodium cellulose phosphate
E. Potassium alkali *(AUA 95-6)*

75. Which of the following mechanisms explain the rationale for using thiazide in renal hypercalciuria?
A. It restores normal serum 1, 25-$(OH)_2$ vitamin D
B. It directly inhibits calcium absorption
C. It caused intracellular volume depletion
D. It corrects the renal leak of calcium by augmen-ting calcium reabsorption in the distal tubule
E. It binds calcium in the intestinal tract *(AUA 95-6)*

76. Sodium cellulose phosphate would be contraindicated in patients with renal hypercalciuria since it might:
A. Cause hypercalcaemia
B. Cause a negative calcium balance
C. Aggravate peptic ulcer disease
D. Cause secondary hyperuricosuria
E. Cause precipitation of calcium apatite *(AUA 95-6)*

77. Potential deleterious effects of thiazide diuretics include:
A. Potential aggravation of hypercalcaemia in pati-ents with primary hyperparathyroidism
B. Hypokalemia
C. Development of hypocitraturia
D. Development of hypermicosuria
E. All of the above *(AUA 95-6)*

78. The most appropriate medication to treat patients with renal tubular acidosis would be:

72 D 73 D 74 E 75 D 76 B 77 A 78 C

A. Sodium alkali **B.** Sodium cellulose phosphate
C. Potassium alkali **D.** Allopurinol
E. Thiazide *(AUA 95-6)*

79. Which of the following is not a potential complication of sodium cellulose phosphate when utilised in treating absorptive hypercalciuria Type II?
A. Hyperoxaluria **B.** Negative calcium balance
C. Hypomagnesuria **D.** Hyperuricosuria
E. GI upset *(AUA 95-6)*

80. Which of the following is contraindicated in patients with recurrent infection calculi?
A. Orthophosphate **B.** Acetohydroxamic acid
C. Aminoglycosides **D.** Increased fluid intake
E. Thiazide *(AUA 95-6)*

81. The most important factor in medical treatment of patients with recurrent cystine calculi is:
A. Binding of cystine in the intestine
B. Increase of the cystine solubility in the intestine
C. Institution of a low methionine diet
D. Reduced dietary sodium intake
E. Alkalinisation of the urine *(AUA 95-6)*

82. Alpha-mercaptopropionylglycine may be helpful in the treatment of cystinuria since:
A. It decreases the solubility of cystine
B. It is significantly more effective than d-penicillamine in reducing cystine excretion
C. It adequately alkalinizes the patient's urine
D. It appears to have reduced toxicity as compared to d-penicillamine
E. Reduces the need for increased fluid intake *(AUA 95-6)*

83. The most important metabolic abnormality predisposing to nephrolithiasis in Type I RTA is:
A. Increased urinary pH **B.** Systemic acidosis
C. Hypocitraturia **D.** Hypercalciuria
E. Hypokalaemia *(AUA 95-7)*

84. Indication for a metabolic workup initiation for RTA would include of the following *except:*

79 D 80 A 81 B 82 D 83 C 84 E

A. Idiopathic hypokalemia associated with stones
B. Recurrent stone disease in children
C. Metabolic bone disease of late onset
D. Severe hypocitraturia associated with stones
E. Recurrent stone disease following small bowel resection
(AUA 95-7)

85. The syndrome of Type IV RTA is associated with all of the following *except:*
A. Hypokalemia **B.** Osteopenia
C. Mild azotemia **D.** Aldosterone deficiency
E. Cardiac arrhythmias *(AUA 95-7)*

86. Hydrogen ion excretion in the distal nephron is affected by the presence of all of the following *except:*
A. Active secretion by proton pumps
B. Tight junctions
C. Luminal carbonic anhydrase
D. Combination with ammonium ion
E. Combination with phosphate *(AUA 95-7)*

87. Characteristics of nephrolithiasis in Type I RTA include all of the following *except:*
A. Bilateral stones **B.** Cortical stones
C. Nephrocalcinosis **D.** Calcium phosphate stones
E. Papillary tip origin of stones *(AUA 95-7)*

88. Causes of Type I RTA include all of the following *except:*
A. Amphotericin **B.** Lithium
C. Acetazolamide **D.** Obstructive uropathy
E. Medullary cystic disease *(AUA 95-7)*

89. A 5 mm wide distal ureteral stone, if left alone, will pass spontaneously in what per cent of patients?
A. 30 to 40 per cent **B.** 40 to 50 per cent
C. 50 to 60 per cent **D.** 60 to 70 per cent
E. 70 to 80 per cent *(AUA 95-8)*

90. Goals of therapy of Type I RTA include all of the following *except:*
A. Correction of systemic acidosis
B. Correction of hyperoxaluria
C. Restoration of urinary citrate to high-normal levels
D. Correction of hypokalemia
E. Correction of hypercalciuria *(AUA 95-7)*

85 A 86 C 87 B 88 E 89 C 90 B

91. The syndrome of Type 2 RTA is characterised by all of the following *except:*
A. Hyperkalemia
B. Hyperchloremia
C. Metabolic bone disease
D. Nonanion gap hyperchloremic metabolic acidosis
E. Disorders of vitamin D metabolism *(AUA 95-7)*

92. The most important goal of therapy of Type I RTA is:
A. Correction of systemic acidosis
B. Elimination of all stones
C. Restoration of urinary citrate levels to high-normal levels
D. Correction of hypokalemia
E. Correction of hypercalciuria *(AUA 95-7)*

93. The diagnosis of complete Type I RTA is made by the demonstration of:
A. Bilateral calcium phosphate nephrolithiasis
B. Failure to acidify the urine below pH 5.5 after ammonium chloride loading
C. Hypocitraturic nephrolithiasis
D. Hypokalemic, hyperchloremic nonanion gap metabolic acidosis associated with nephrolithiasis
E. Fasting morning urinary pH > 5.5 in the presence of systemic acidosis *(AUA 95-7)*

94. Plain film radiography overestimates the ureteral calculus in what percentage of cases?
A. 10 to 20 per cent **B.** 20 to 30 per cent
C. 30 to 40 per cent **D.** 40 to 50 per cent
E. 50 to 60 per cent *(AUA 95-8)*

95. A totally obstructing ureteral stone will produce permanent renal damage after:
A. 3 to 10 days **B.** 10 to 14 days
C. 15 to 25 days **D.** 25 to 35 days
E. 35 to 60 days *(AUA 95-8)*

96. A 37-year-old pregnant female in the first trimester is admitted for severe ureteral colic. A KUB shows a 7 mm wide stone at S_3 with proximal 2+ hydronephrosis. Her temperature and WBC are normal. The most appropriate treatment is:
A. Allow her to suffer the colic and pass the stone spontaneously
B. Immediate ureteroscopy and stone fragmentation
C. Stent bypass, then removal to allow spontaneous passage
D. Stent until delivery
E. ESWL *(AUA 95-8)*

91 A 92 A 93 D 94 E 95 D 96 D

97. A 47-year-old quadriplegic male underwent ESWL for a 2 cm right renal pelvic struvite stone and four days later was admitted to the emergency room with severe colic and temperature of 104. A KUB shows a 4 cm of steinstrasse to the level of the ureteral meatus. There was no visible lead fragment. The most appropriate treatment is:

A. ESWL of distal steinstrasse
B. Ureteroscopy, EHL and stent
C. Use stone basket to remove distal 1 cm of fragments, then stent
D. Ureteroscopy, use tipless balloon to dilate orifice and ultrasound to remove fragments
E. Place percutaneous nephrostomy tube and allow spontaneous passage *(AUA 95-8)*

98. A 65-year-old male with a history of brushite calculi is referred for treatment of a 1.2 cm wide smooth dense calculus lodged at the level of the iliac vessels, causing grade 1 to 2 hydronephrosis and failed one stented ESWL and an attempt at miniscope ureteroscopy. The most suitable treatment alternative is:

A. Repeat ESWL
B. Repeat ureteroscopy
C. Percutaneous access and stone extraction
D. Ureterolithotomy
E. Retrograde manipulation of stone and ESWL *(AUA 95-8)*

99. The energy source for ESWL which produces the smallest focal zone is:

A. Electrohydraulic **B.** Electromagnetic
C. Laser **D.** Piezoelectric
E. Microexplosion *(AUA 95-28)*

100. The most powerful shock wave lithotripsy machine listed below is:

A. Dornier MFL 5000 **B.** Dornier HM3 (unmodified)
C. Wolf Piezolith 2500 **D.** Siemens lithostar
E. EDAP LTo1 *(AUA 95-28)*

101. Advantages of ultrasound as an imaging modality during shock wave lithotripsy include all of the following *except:*

A. Required for biliary lithotripsy
B. Minimises radiation exposure
C. Real time (continuous) imaging during lithotripsy
D. Facilitates treatment of radiolucent calculi
E. Facilitates treatment of ureteric calculi *(AUA 95-28)*

102. The trauma to renal tissue resulting from ESWL may result in all of the following *except:*

97 E 98 D 99 D 100 B 101 E 102 A

A. An increased risk of hypertension
B. Perinephric hematoma
C. Increases in diastolic blood pressure
D. Hematuria
E. Renal contusion *(AUA 95-28)*

103. Disadvantages of ultrasound imaging for ESWL include all of the following *except:*
A. Steep learning curve for the occasional user
B. Ureteral stones difficult to image
C. Ultrasound imaging hindered by obesity
D. Uric acid stones difficult to image with ultrasound
E. Stone fragmentation difficult to assess with ultrasound *(AUA 95-28)*

104. Features of newer lithotripsies (i.e. second, third-generation, etc.) include all *except:*
A. Smaller focal zones
B. Dual imaging (ultrasound and X-rays)
C. Multiple functions (i.e. biliary and endourology)
D. More power
E. A water cushion instead of a water bath for shock wave coupling *(AUA 95-28)*

105. Juvenile nephrolithiasis and medullary cystic disease both cause ____ and _____ in more than 80 per cent of cases:
A. Polydipsia, polyuria
B. Hypertension, hematuria
C. Polycythemia, hypertension
D. Diabetes insipidus, hematuria *(CU 7 1775)*

106. Uric acid stones, which are radiolucent on standard urography, are opaque on CT scans because their radiodensity is usually greater than ____ HU:
A. 100 **B.** 200
C. 300 **D.** 400 *(CU 7 2389)*

107. Abandoned method of renal calculi analysis:
A. Chemical analysis
B. Polarising microscopy
C. X-ray diffraction
D. Infrared spectroscopy *(CU 7 2704-5)*

108. It appears that the _____ lithotripsy causes the greatest temperature increase and use of this device has been associated with the greatest incidence of ureteral injury:

103 D 104 D 105 A 106 A 107 A 108 C

A. Ultrasonic
B. Laser
C. Electrohydraulic
D. None of A, B or C is true *(CU 7 2784)*

109. Urinary calculi have been associated with several treatments of HIV infection: The strongest is with protease inhibitors especially__.
A. Indinavir **B.** Valacyclovir
C. Famciclovir **D.** Achclovir *(CU9-397)*

110. Inhibitors of calcium oxalate stone formation:
A. Citrate **B.** Tamm-Horsfall mucoprotein
C. Osteopontin **D.** Bikunin
E. All of above **F.** Only A and D *(CU9-1370)*

111. Most potent stimulator of intestinal calcium ab-sorption:
A. $1,25(OH)_2\ D_3$ **B.** Parathyroid hormone
C. Calcitriol **D.** Osteopontin *(CU9-1371)*

112. The most important pathogenic factor in uric acid stone formation:
A. Low urine volume
B. Hyperuricosuria
C. Low urine pH
D. Congenital uric acid metabolic disorders *(CU9-1382)*

113. The matrix component of calcium based urinary stones comprise only 2.5% of the dry weight of the stone, whereas pure matrix stones may contain upward of ___% proteins.
A. 35 **B.** 65
C. 85 **D.** 15 *(CU9-1388)*

114. 'Coffin-lid' crystals in urinary sediment are seen in patients with:
A. Calcium oxalate monohydrate calculi
B. Struvite calculi
C. Apatite calculi
D. Brushite calculi *(CU9-1395)*

115. Hour glass microscopic appearance is seen in ___ urinary calculi.
A. Calcium oxalate monohydrate
B. Calcium oxalate dehydrate
C. Calcium phosphate apatite
D. Magnesium ammonium phosphate *(CU9-1397)*

109 A 110 E 111 A 112 C 113 B 114 B 115 A

116. Yeasts that may produce urease:
1. Cryptococcus
2. Rhodotorula
3. Sporobolomyces
4. Candida humanicola
5. Trichosporon cutaneum
A. All B. Only 1,2,3
C. Only 4,5 D. None of above *(CU9-1407)*

117. Which urinary acidifying agent, a urease inhibitor, has side effects like deep vein thrombosis?
A. Ascorbic acid
B. Methenamine hippurate
C. Ammonium chloride
D. Acetohydroxamine acid *(CU9-1426)*

118. Renal calculus formation is provoked by:
A. Indinavir **B.** Ephedrine
C. Triamterene **D.** Topiramate *(CU9-1427)*

119. Each plain X-ray film exposes the fetus to ___ rad, well below the threshold of 1.2 rad, when the risk begins to increase.
A. 0.1 – 0.2 **B.** 0.3 – 0.4
C. 0.5 – 0.6 **D.** 0.7 – 0.8 *(CU9-1429)*

120. A calculated urinary calcium/creatinine ratio, the most important of various ones, above ___ has been considered abnormal in children and frequently prompts detailed evaluation.
A. 0.1 **B.** 0.2
C. 0.05 **D.** 0.0 *(CU9-1428)*

121. ____ is one of the safest, most effective, and most versatile intracorporeal lithotripters.
A. Pneumatic **B.** Electrohydraulic
C. Holmium laser **D.** Nd: YAG laser *(CU9-1461)*

122. Production of cyanide, when uric acid stones are treated, is a potential side effect of ___.
A. Holmium laser lithotripsy
B. Nd: YAG laser lithotripsy
C. Pulsed dye laser lithotripsy
D. Electrohydraulic lithotripsy *(CU9-1461)*

123. A clinical dose of ESWL always induces injury to the nephrons and small to medium sized blood vessels within ___ region.
A. F_2 **B.** F_1
C. F_3 **D.** F_4 *(CU9-1478)*

116 A 117 D 118 D 119 A 120 B 121 C 122 A 123 A

124. The holmium: YAG laser, now recognized to be the gold standard for ureteroscopic intracorporeal lithotripsy, energy travels no further than ___ in a liquid mdium providing a substantial margin of safety in preventing uretral injury.

A. 1–2 mm **B.** 2–3 mm
C. 0.5–1.0 mm **D.** 0.2–0.4 mm *(CU9-1514)*

125. ___ lithotripsy was found to be more efficient for large or particularly hard urinary bladder calculi.

A. Pneumatic **B.** Ultrasonic
C. Electrohydraulic **D.** No *(CU9-2669)*

124 C 125 A

15 Urosurgery

Preoperative Care

1. Which of the following two factors remain the two strongest predictors of perioperative cardiac morbidity?

1. Recent myocardial infarction (less than 6 months)
2. Congestive heart failure
3. Smoking
4. Diabetes
5. Age over 70 years
6. More than 5 ventricular premature beats/minute

A. 1 and 2 **B.** 1 and 3
C. 1 and 4 **D.** 1 and 5 *(CU 2315)*

2. Perioperative myocardial infarction usually occurs in the first postoperative week and is silent in about:

A. 25 per cent of patients
B. 50 per cent of patients
C. 75 per cent of patients
D. 100 per cent of patients *(CU 2327)*

3. The most common complication of epidural analgesia is:

A. Malignant hyperthermia
B. Thromboembolism in the lower limbs
C. Hypertension
D. Hypotension *(CU 2327)*

4. The most common complication of patient-controlled analgesia is:

A. Respiratory depression
B. Hypotension
C. Barotrauma
D. Urinary retention *(CU 2327)*

1 A 2 B 3 D 4 A

5. **Patients with mild renal insufficiency and a GFR between ____ ml/minute have an increased risk of developing perioperative renal failure:**
   A. 75 to 100 **B.** 50 to 75
   C. 25 to 50 **D.** 10 to 25 *(CU 2331)*

6. **Although ion-exchange resins are commonly used to treat hyperkalemia, they may cause ___ in uremic patients:**
   A. Severe hypokalemia
   B. Severe cardiac arrhythmias
   C. Severe acid-base disturbance
   D. Extensive ischaemic colitis *(CU 2332)*

7. **Aminoglycosides remain one of the major causes of acute renal insufficiency. While aminoglycosides are given, the serum creatinine level:**
   A. Should be measured at least every other day
   B. Should be measured daily along with daily creatinine clearance
   C. Should be kept low by checking the drug level in the serum at least daily
   D. Should be measured at least every alternate day and for 4 to 6 days following therapy *(CU 2333)*

8. **Which of the following statements regarding blood transfusion is *correct*?**
   A. Transfusion of whole blood or packed red blood cells immediately increase oxygen availability to the tissues to the extent indicated by a rising haemoglobin level
   B. 2, 3-DPG level must come down after transfusion of stored blood to have desired oxygen delivery to the tissues
   C. There is about a 50 per cent degradation of 2, 3-DPG within four hours of transfusion of stored packed red blood cells
   D. Normal oxygen delivery may not be achieved for 24 hours after transfusion of stored whole blood or packed red blood cells, for 2, 3-DPG must be regenerated in the red blood cells after transfu-sion to do so *(CU 2337)*

9. **Which of the following statements about the gram-negative bacteremia and septic shock is *false*?**
   A. Gram-negative bacteremia account for about 70 per cent of septicemias
   B. *Escherichia coli* is the single most common causative organism
   C. The *klebsiella*-enterobacter-serratia family is the next most common group of organisms and account for about 20 per cent of cases

5 B 6 D 7 D 8 D 9 D

D. *E. coli* causes about 50 per cent of cases and is associated with worst prognosis *(CU 2350)*

10. Increasing levels of serum lactic acid in a case of gram-negative septicemia are associated with:
A. A poor prognosis
B. A good prognosis
C. An increased likelihood of disseminated intravascular coagulopathy
D. A decreased likelihood of going into hyper-kalemic state *(CU 2351)*

11. In urologic patients, Ogilvie's syndrome occurs most often after pelvic surgery and may be caused by a retractor putting pressure over the sigmoid colon. The most distensible segment of the large bowel is the:
A. Cecum **B.** Ascending colon
C. Transverse colon **D.** Splenic flexure
E. Rectosigmoid junction *(CU 2352)*

12. Patients in lithotomy position are particularly prone for developing compartment syndrome. All of the following are prophylactic measures to prevent compartment syndrome *except:*
A. A prolonged lithotomy position should be avoided
B. The ankles should be placed in a dorsiflexion
C. Frequent repositioning of the legs with stirrups that support both the thigh and the lower leg
D. Patients undergoing cystectomy with simultaneous urethrectomy should be kept in the supine position until the legs are raised for the urethrectomy *(CU 2352)*

13. Ulnar nerve palsy are among the most common focal peripheral neuropathies and can be a recurrent problem in patients undergoing abdominal and pelvic surgery. Ulnar nerve injury occurs most often when the patient's arm is:
A. Adducted and supinated
B. Adducted and pronated
C. Abducted and pronated
D. Abducted and supinated *(CU 2353)*

14. Anemia is common in patients with severe renal insufficiency. These patients are usually well- adjusted to hematocrits between 18 and 24 per cent because:
A. Of decreased production of erythropoietin
B. Of decreased action of erythropoietin

10 A 11 A 12 B 13 C 14 C

C. Of increased production of 2,3-diphosphoglycerate
D. Of decreased demand of oxygen *(CU 2332)*

15. Patients with moderate or severe renal insufficiency are at risk for increased perioperative haemorrhage primarily from abnormal platelet function. The best laboratory test to assess this risk is:
A. The bleeding time
B. The clotting time
C. The prothrombin time
D. The partial thromboplastin time *(CU 2333)*

16. Jehovah's Witness patients are those who cannot accept either homologous or autologous transfusions. They are members of a religious organisation which believes that the end of the world is near and that everyone will be damned except its own members. This statement is:
A. True **B.** False *(CU 2341)*

17. Serum albumin level and lymphocyte count reflects visceral protein status. The lymphocyte count is normally greater than:
A. $1000/mm^3$ **B.** $2000/mm^3$
C. $3000/mm^3$ **D.** $4000/mm^3$ *(CU 2344)*

18. Eighty per cent of nitrogen lost in the urine is excreted as urea, and about ____ of nitrogen is excreted per day in the faeces and through the skin:
A. 0.75 g **B.** 2.25 g
C. 1.25 g **D.** 4.5 g *(CU 2345)*

19. Patients having dialysis must be allowed extra protein in the diet, because they loose free amino acids during each hemodialysis session between:
A. 6 and 10 g **B.** 10 and 20 g
C. 3 and 7 g **D.** 15 to 20 g *(CU 2347)*

20. Application of antimicrobial agents at the urethral meatus to reduce the risk of urinary tract infection associated with catheterisation has been ineffective, and cleansing the meatus with soap and water is associated with an _____ risk of infection:
A. Decreased **B.** Increased *(CU 2347)*

21. Although it is desirable to avoid surgery during pregnancy, obstructing urinary stones usually can be safely removed during any stage of pregnancy. The risk of spontaneous abortion associated with surgery is greatest during:
A. First trimester **B.** Second trimester
C. Third trimester *(CU 2352)*

15 A 16 A 17 B 18 C 19 A 20 B 21 C

22. The combination of venous stasis, injured vessel wall, and a hypercoagulable state is termed:
A. Chronic venous insufficiency
B. Phlegmasia alba dolens
C. Virchow's triad
D. Huntington's triad
E. Vena cava syndrome *(AUA 94-28)*

23. Venous thromboses are composed of:
A. Mostly platelets, few RBC
B. RBC, WBC, and protein
C. RBC, fibrin, a few platelets
D. RBC and clotting factors
E. All fibrin *(AUA 94-28)*

24. Which of the following would represent a major risk factor for deep vein thrombosis?
A. Age 30
B. Outpatient surgery
C. Anaesthesia case of six hours
D. Urinary tract infection
E. History of smoking *(AUA 94-28)*

25. Which diagnostic study for deep vein thrombosis carries the greatest patient risk?
A. Contrast Venogram **B.** Pulmonary scan
C. Chest X-ray **D.** Fibrinogen I 125 scan
E. Duplex imaging *(AUA 94-28)*

26. A 72-year-old postoperative male is a smoker, and weighs 260 pounds. He is being treated for deep vein thrombosis when he has symptoms of dyspnea. Chest X-ray shows mild pulmonary infiltrate. A pulmonary scan and duplex pulmonary imaging are nondiagnostic for pulmonary embolism and yet still abnormal. Appropriate management is:
A. To begin treatment for pulmonary embolism
B. Repeat renal scan
C. No further diagnostic or therapeutic intervention
D. Repeat duplex pulmonary imaging
E. Pulmonary angiography *(AUA 94-28)*

27. Which of the following is a contraindication to use of external pneumatic compression?
A. Procedure with extensive blood loss
B. Severe atherosclerosis
C. Length of the operative procedure
D. Diabetes mellitus
E. Varicose veins *(AUA 94-28)*

22 C 23 C 24 C 25 A 26 E 27 B

28. Which of the following has been found to be of no use in prevention of deep vein thrombosis?

A. External pneumatic compression
B. Dicumarol **C.** Aspirin
D. Heparin **E.** Warfarin *(AUA 94-28)*

Adrenals

29. Which of the following varieties of adrenal cysts accounts for the highest percentage of these lesions?

A. Parasitic cysts **B.** Epithelial cysts
C. Pseudocysts **D.** Endothelial or lymphangiomatous cysts
(CU 2381)

30. The term primary hyperaldosteronism (originally coined by Conn) describes the clinical syndrome characterised by:

A. Hypertension, hyperkalemia, hypernatremia, acidosis, and periodic paralysis
B. Hypotension, hyperkalemia, hyponatremia, and alkalosis
C. Hypertension, hypokalemia, hypernatremia, alkalosis, and periodic paralysis due to an aldosterone secreting adenoma
D. Hypertension, hypokalemia, hyponatremia, alkalosis
(CU 2384 BHU)

31. Hypertension is by far the most consistent sign associated with pheochromocytoma. The most common pattern found in children and patients with multiple endocrine adenoma Type II is:

A. Sustained hypertension
B. Paroxysmal hypertension
C. Both A and B
D. Sustained hypertension with superimposed paroxysms
(CU 2389)

32. The most common site of origin of neuroblastoma is:

A. Adrenal **B.** Renal
C. Ganglionic **D.** Mediastinal
E. Pelvic *(AUA 93-35)*

33. Appropriate evaluation of patients suspected of having neuroblastoma include all of the following *except:*

A. Bone marrow biopsy **B.** Urine catechol determination
C. Brain scan **D.** Bone scan
E. CT scan *(AUA 93-35)*

28 C 29 D 30 C 31 A 32 A 33 C

34. The most common physical finding in neuroblastoma is:
A. Hypertension **B.** Abdominal mass
C. Horner's syndrome **D.** Opsoclonus
E. Subcutaneous nodules *(AUA 93-35)*

35. Which of the following is a site of disease in stage 4S neuroblastoma?
A. Lung **B.** Heart
C. Cortical bone **D.** Skin
E. Brain **F.** Spleen *(AUA 93-35)*

36. The most important prognostic factors in neuroblastoma include all of the following *except:*
A. Serum ferritin level **B.** Urine VMA level
C. Patient age **D.** Tumour histology
E. Tumour stage *(AUA 93-35)*

37. The preferred initial management of stage 4S neuroblastoma is:
A. Observation **B.** Surgery
C. Radiation **D.** Chemotherapy
E. Bone marrow transplant *(AUA 93-35)*

38. Which of the following patients with stage 2 neuroblastoma would have the poorest prognosis?
A. Diploid DNA content, N-myc amplification, loss chromosome 1p
B. Hyperploid DNA content, N-myc amplification, loss chromosome 1p
C. Hyperploid DNA content, one copy N-myc, loss chromosome 1
D. Failed to improve on alpha-blockers *(AUA 93-35)*

Kidneys

39. Which of the following statements related to renal tolerance to warm ischaemia is incorrect?
A. Histologically renal ischaemia is most damaging to the glomeruli
B. In general, 30 minutes is the maximum tolerable period of arterial occlusion before permanent damage is sustained
C. The solitary kidney is more resistant to ischaemic damage than the paired kidney
D. Continuous occlusion of both the renal artery and vein for an equivalent time interval is more damaging
E. Intermitted clamping of the renal artery with short periods of recirculation is also more damag-ing than continuous arterial occlusion *(CU 2417)*

34 B 35 D 36 B 37 A 38 A 39 A

40. Manual renal compression to control intraoperative haemorrhage is ____ deleterious than simple arterial occlusion:
A. Less **B.** More
C. Contraindicated as it is more *(CU 2417)*

41. Intraoperative mannitol administration is one of the preventive measures to decrease ischaemic renal damage in patients undergoing operations that involve a period of temporary renal arterial occlusion. It is most effective when given:
A. 2 to 3 minutes after occlusion
B. 5 to 15 minutes prior to occlusion
C. Immediately after occlusion
D. 30 minutes prior to occlusion *(CU 2417)*

42. The most frequent cause of end stage renal disease is:
A. Hypertension **B.** Glomerulonephritis
C. Diabetes mellitus **D.** Calculous renal disease *(CU 2501)*

43. All of the following are indications for pretrans-plant nephrectomy *except:*
A. Hypertension that is not controlled by dialysis or medications
B. Persistent renal infection
C. Diabetes mellitus
D. Renal calculi *(CU 2503)*

44. All of the following are indications for pretrans-plant nephrectomy *except:*
A. Renal obstruction
B. Severe proteinuria
C. Severe bleeding
D. Polycystic kidneys with infection
E. Massive enlargement of the kidney
F. Renovascular hypertension *(CU 2503)*

45. Pretransplant nephrectomy is usually performed ____ weeks before transplantation:
A. 5 **B.** 6
C. 8 **D.** 12 *(CU 2503)*

46. On evaluation of the living donor for renal trans-plantation, if one of the kidney is better than the other:
A. The better kidney is left with the donor
B. The better kidney is taken for transplantation
C. The donor is advised not to donate
D. This situation is a contraindication for donating the either kidney *(CU 2505)*

40 B 41 B 42 C 43 C 44 F 45 B 46 A

47. The most rigid guidewire available is:
A. 0.035 inch Terumo guidewire
B. 0.035 inch Bentson guidewire
C. 0.035 inch Amplatz guidewire *(CU 2280)*

48. Immunosuppression is usually started____before transplantation in the recipient of a living-donor kidney transplant and just before or during surgery in the cadaver kidney graft recipient:
A. 1 week **B.** 2 weeks
C. 3 weeks **D.** 4 weeks *(CU 2509)*

49. Which of the following class of antigens are present on B-lymphocytes, activated T-lymphocytes, monocytes, macrophages, dendritic cells, and some endothelial cells?
A. HLA-A, HLA-B, HLA-C
B. HLA-DR, HLA-DQ, HLA-DP
C. HLA-A, HLA-DR, HLA-DQ
D. HLA-B, HLA-DP, HLA-C *(CU 2531)*

50. After renal transplant, during postoperative period, there is fever, urinary output has decreased, there is graft tenderness, graft size has increased, there is rapid rise in serum creatinine and decreased blood flow and renal biopsy shows cellular infiltration and vasculitis. The diagnosis is:
A. Cyclosporine toxicity **B.** Acute graft rejection
C. Renal artery stenosis **D.** Hyperacute rejection *(CU 2516)*

51. Atherosclerotic stenosis of the renal artery giving rise to renovascular hypertension, can be bilateral but when unilateral, more frequently involves the:
A. Left renal artery **B.** Right renal artery
C. Occur with equal frequency *(CU 2521)*

52. Antihypertensive drugs that deplete catecholamine stores in the nerve end plates are discontinued ___ weeks before operation for renovascular hypertension:
A. 4 **B.** 3
C. 2 **D.** 1 *(CU 2528)*

53. All of the following are operative procedures for renovascular hypertension *except:*
A. Partial nephrectomy
B. Polar nephrectomy
C. Midpolar partial nephrectomy
D. Renal endarterectomy
E. None of the C or D *(CU 2530-2531)*

47 C 48 A 49 B 50 B 51 A 52 C 53 C

Ureters

54. The ureter can close its own defect by regenerating all of its components. The defect is first bridged by transitional cell epithelium and mucosal healing is complete at 3 weeks with smooth muscle bridging at:

A. 4 weeks **B.** 5 weeks
C. 6 weeks **D.** 8 weeks *(CU 5553)*

55. How many days are required for the resumption of the passage of electrical activity across an anastomotic ureteral site?

A. 28 days **B.** 35 days
C. 42 days **D.** 56 days *(CU 2553)*

56. During the healing phase, an ureteral defect may be watertight within ___ hours. Urine flow through an anastomosis does not seem to interfere with the organisation of repair: however, with continued urine flow the process requires a longer time:

A. 12 to 24 hr **B.** 24 to 48 hr
C. 48 to 72 hr **D.** 72 to 96 hr *(CU 2554)*

57. Which of the following are the two most common complications of renal revascularisation surgery?

A. Anastomotic leak and graft necrosis
B. Haemorrhage and thrombosis
C. Stenosis and haemorrhage
D. Haemorrhage and embolism *(CU 2547)*

58. The defect in ureter after ureterotomy is first bridged by transitional cell epithelium, and mucosal healing is complete at:

A. 2 weeks **B.** 3 weeks
C. 4 weeks **D.** 6 weeks *(CU 2553)*

59. In which of the following disease processes requiring ureterolysis, the contralateral normal ureter may also require prophylactic therapy?

A. Retroperitoneal fibrosis
B. Endometriosis
C. Periaortic aneurysmal fibrosis
D. Previous radiation therapy *(CU 2553)*

60. Ureterolysis alone is inadequate treatment to prevent reinvolvement by the fibrotic process. At this point, the ureters may be handled in all of the following ways *except:*

54 C 55 A 56 B 57 B 58 B 59 A 60 D

A. Transplanted to an intraperitoneal position
B. Transposed laterally and anteriorly, with retroperitoneal fat placed between the ureter and the fibrosis
C. Covered by omental sleeves
D. Posterolateral psoas hitch *(CU 2557)*

61. Which of the following approaches may be utilised for ureterolithotomy in the lower third of the ureter in a female?
A. Midline incision **B.** Pfannenstiel incision
C. Gibson incision **D.** Transvaginal approach
E. All of the above *(CU 2559)*

62. The most common complication following ureterolithotomy is:
A. Anastomotic stenosis
B. Haemorrhage from anastomotic site
C. Clot obstruction
D. Persistent urinary leakage *(CU 2560)*

63. The primary contraindication to ureteroureterostomy is:
A. Inadequate length **B.** Presence of abscess
C. Haematoma **D.** Urinoma *(CU 2560)*

64. Intubated ureterotomy can be readily applicable to strictures of the ureter as long as:
A. 4 to 6 cm **B.** 6 to 8 cm
C. 8 to 10 cm **D.** 10 to 12 cm *(CU 2563)*

65. Under most circumstances, how much of bladder tube can be created by Boari flap technique of bridging large ureteral defects?
A. 16 cm **B.** 14 cm
C. 12 cm **D.** 10 cm
E. 8 cm *(CU 2565)*

66. Which of the following statements is incorrect regarding stricture formation after cutaneous ureterostomy?
A. Fixation to the internal oblique prevents retr-action of the ureter thereby causing less ischaemia and stenosis
B. An ureter with a radiographic diameter of 8 mm had a lower stricture rate than a normal caliber ureter
C. An everted stoma had a lower stricture rate than a flush stoma
D. Patients with preoperative irradiated ureters and skin were predisposed to stomal stenosis *(CU 2567)*

61 E 62 D 63 A 64 D 65 C 66 A

Trauma and Urinary Diversion

67. Rupture of the posterior urethra is not uncommonly associated with pelvic fracture, particularly the Malgaigne fracture, and that is:
A. Vertical fracture through ilium or one or more pubic rami
B. Avulsion of the anterior inferior iliac spine
C. Fracture of the pubic ramus (single fracture of the ring)
D. Disruption of the symphysis pubis anteriorly and that of sacroiliac joint posteriorly *(CU 2583)*

68. The radiographic view of posterior urethral rupture with the intact vesical neck and bladder distended with contrast material well above the symphysis has been referred to as:
A. 'Tear drop' **B.** 'Pie in the sky'
C. 'Light bulb' **D.** 'Thimble' *(CU 2583)*

69. Which of the following is not a major complication of posterior urethral injury?
A. Urinary incontinence **B.** Urinary retention
C. Stricture **D.** Impotence *(CU 2584)*

70. Of posterior urethral disruption, ___ per cent is complete:
A. 100 **B.** 95
C. 85 **D.** 75 *(CU 2585)*

71. The attachments of Colles fascia becomes the limiting factor for extravasation of urine and blood during penile trauma if:
A. The Buck's fascia is ruptured
B. The Dartos fascia is ruptured
C. The tunica albuginea is disrupted
D. The intercavernous septum is torn *(CU 2585)*

72. In degloving injury of the penis, the thin split-thickness graft less than___to the shaft of the penis sometimes do not permit proper corporal expansion during erection and a source of discomfort to the patient:
A. 0.15 cm **B.** 0.15 inch
C. 0.15 mm **D.** 0.20 mm *(CU 2591)*

73. The small bowel is about 22 feet long: its largest diameter is in the:
A. Duodenum **B.** Jejunum
C. Ileum **D.** Terminal ileum *(CU 2596)*

67 A 68 B 69 B 70 B 71 A 72 A 73 A

74. It has been shown experimentally that up to ____ of small bowel can survive lateral to a straight vessel. Generally, however, it is unwise to assume that more than 8 cm of bowel will survive away from a straight vessel:

A. 10 cm **B.** 12 cm
C. 15 cm **D.** 20 cm *(CU 2596)*

75. Which of the following originates directly from the aorta?

A. Middle sacral artery
B. Superior haemorrhoidal artery
C. Middle haemorrhoidal artery
D. Inferior haemorrhoidal artery *(CU 2597)*

76. It is usually wise to choose an area for anastomosis to one side of the three weak points involving the vascular supply of the colon. One of them is located between the junction of the sigmoid and superior haemorrhoidal arteries, and that is known as:

A. Sudeck's critical point
B. Drummond's danger area
C. Leadbetter's site
D. Critical point of Wallace *(CU 2597)*

77. All of the following are advantages of stomach over other intestinal segments for urinary intestinal diversion *except:*

A. It is less permeable to urinary solutes
B. It acidifies the urine
C. It has a net excretion of chloride
D. It produces less mucus
E. The incidence of bacteriuria is about 60 per cent

(CU 2598)

78. The bacterial concentration in the jejunum range from 10° to 10^5, in the ileum from 10^5 to 10^7, in the ascending colon from 10^6 to 10^8, and in the descending colon from ___ to ___ organism per gram of faecal content:

A. 10^{10} to 10^{12} **B.** 10^{12} to 10^{14}
C. 10^{14} to 10^{16} **D.** 10^{16} to 10^{18} *(CU 2599)*

79. Which of the following solutions is preferred for mechanical bowel preparation before going for urinary intestinal diversion operations?

A. Ringer's lactate **B.** 10 per cent mannitol
C. Isotonic saline **D.** Polyethylene glycol electrolyte

(CU 2599)

74 C 75 A 76 A 77 E 78 A 79 D

80. Which of the following is the best agent for antibiotic bowel preparation before urinary intestinal diversion operation?
A. Kanamycin **B.** Neomycin
C. Erythromycin **D.** Metronidazole *(CU 2600)*

81. Which of the following is not a good principle of intestinal anastomoses in order to minimise morbidity and mortality from intestinal surgeries?
A. Adequate exposure
B. Maintain a good blood supply to the severed ends of the bowel
C. Preventing local spillage of enteric contents
D. The anastomotic line should be everted and not inverted
E. Not to tie the suture so tight that the tissue is strangulated *(CU 2601)*

82. The critical point of the enteroenterostomy by a single layer suture anastomosis, where most leaks occur, is the:
A. At the mesenteric border
B. At the antimesenteric border
C. At the proximal segment
D. At the distal segment *(CU 2603)*

83. The most common cause of postoperative (urinary intestinal diversion) bowel obstruction is:
A. Recurrent cancer **B.** Adhesions
C. Volvulus **D.** Internal hernia *(CU 2607)*

84. The site of abdominal stomas for urinary diversion should be well away from skin creases, scars, umbilicus, belt lines, bony prominences, and should be at least ___ away from the planned incision line:
A. 3 cm **B.** 5 cm
C. 7 cm **D.** 10 cm *(CU 2608)*

85. One of the most difficult complication of ureterointestinal anastomoses to manage is stricture. This is generally caused by ischaemia, urine leak, radiation, or infection. The incidence of urine leak for all types of ureterointestinal anastomoses is 3 to 5 per cent. This incidence of leak can be reduced to near zero if:
A. The anastomosis is retroperitonealised
B. A pedicle flap of peritoneum is placed over the anastomosis
C. The bowel is fixed to the abdominal cavity preferably adjacent to the site of ureterointestinal anastomosis
D. Soft silastic stents are utilised *(CU 2612)*

80 A 81 D 82 A 83 B 84 B 85 D

86. All of the following techniques establishes a nonrefluxing ureterocolonic anastomosis *except:*
A. Cordonnier and Nesbitt
B. Leadbetter and Clarke
C. Stricker
D. Pagano
E. Transcolonic technique of Goodwin *(CU 2612-2614)*

87. Which of the following establishes a refluxing anastomosis between ureter and small intestine?
A. Wallace technique **B.** Splint nipple technique
C. Leduc method **D.** Bricker anastomosis
E. A and D *(CU 2614-2616)*

88. With respect to small bowel antireflux procedures of ureterointestinal anastomoses, one of the following procedures seems to offer the lowest incidence of stricture and highest success in preventing reflux:
A. Leduc method **B.** Wallace technique
C. Bricker anastomosis **D.** Hammock anastomosis
E. A and C *(CU 2618)*

89. With respect to stricture formation and leakage, which procedure appears to give best results?
A. Hammock anastomosis
B. Wallace technique
C. Leduc method
D. Bricker anastomosis *(CU 2618)*

90. Ureteral strictures also occur away from the ureterointestinal anastomosis. These are most common in the ____ ureter and are usually found as the ureter crosses over the aorta, beneath the inferior mesenteric artery:
A. Left **B.** Right
C. Pelvic ureters **D.** Infantile *(CU 2618)*

91. Which of the following goes in favour of a patient to be considered for a retentive urinary diversion?
A. All of the following
B. Urine pH of 5.8 or less following an ammonium chloride load
C. A urine osmolality of 600 mOsm/kg or greater in response to water deprivation
D. A glomerular filtration rate that exceeds 35 ml/min
E. Minimal protein in the urine *(CU 2619)*

86 A 87 E 88 A 89 B 90 A 91 A

92. There are five components of renal function: match the following two columns:

A. Renal blood flow	1. Urinary protein concentration
B. Glomerular filtration	2. By water deprivation
C. Tubule transport	3. Inulin clearance
D. Glomerular permeability	4. By ammonium chloride loading
E. Concentration and dilution	5. Nephrogram

(CU 2619)

93. Hypochloremic metabolic alkalosis may occur if ____ is utilised for urinary intestinal diversion:

A. Stomach **B.** Jejunum
C. Ileum **D.** Colon
E. Rectum *(CU 2620)*

94. Hypokalemia and total body depletion of potassium may occur in patients with urinary intestinal diversion. This is more common in patients with:

A. Ureterosigmoidostomies
B. Ureteroileostomy
C. Ureterojejunostomy
D. Ureteroileocecostomies *(CU 2621)*

95. The syndrome of altered sensorium as a consequence of altered ammonia metabolism is most commonly reported in patients with:

A. Ureterosigmoidostomies
B. Ureterojejunostomies
C. Ileocecal conduits
D. Ileal conduits *(CU 2622)*

96. Osteomalacia is most commonly seen in patients with:

A. Colocystoplasty **B.** Ileal ureters
C. Colonic conduits **D.** Ileal conduits
E. Ureterosigmoidostomy *(CU 2622)*

97. Deterioration of upper tracts after urinary intestinal diversion is more likely when the culture becomes dominant for:

A. *Proteus* or *pseudomonas*
B. *E. coli* or *klebsiella*
C. *Mycoplasma* or *pseudomonas*
D. *Aspergillus* or *staphylococcus* *(CU 2623)*

92 A:5, B:3, C:4, D:1, E:2 93 A 94 A 95 A 96 E 97 A

98. The majority of stones formed in patients with urinary intestinal diversion are composed of:
A. Calcium oxalate
B. Uric acid
C. Calcium phosphate dihydrate
D. Calcium, ammonium, magnesium *(CU 2663)*

99. For augmentation cystoplasty and reconstruction, bladder or reservoir pressure in general, should be preferably always below ____ of water, so that upper tracts and continence are preserved:
A. 50 cm **B.** 40 cm
C. 30 cm **D.** 20 cm
E. 10 cm *(CU 2633)*

100. While performing augmentation cystoplasty, the incorporation of the ileum into the cecum may be done in a variety of ways like "Le Bag" or the MAINZ pouch. In both techniques, the entire ileocecal segment is opened along the antimesenteric border. The "MAINZ pouch" differs in that:
A. The opened ileum is anastomosed to the opened cecum to create a cup which is sutured to the opened bladder
B. The ileum is first folded into two segments of equal length; the opened cecum and the two ileal segments are then sutured side-to-side
C. An appendectomy is usually performed
D. The suture technique is a two-layer closure: an inner layer of running interlocking 3-0 chromic and outer layer of running 3-0 vicryl suture *(CU 2638)*

101. All of the following are disadvantages of using sigmoid colon for colocystoplasty *except:*
A. Thick muscular wall
B. Strong unit contractions
C. Mucus production
D. Diverticular formation *(CU 2638)*

102. Postcystoplasty spontaneous rupture of the bladder is potentially a life-threatening occurrence; nausea and vomiting are most commonly noted; only 50 per cent of patients with ruptures have abdominal pain. Which of the following is a diagnostic test?
A. Cystogram **B.** Cystoscopy
C. Ultrasonography **D.** CT scanning *(CU 2643)*

103. The incontinent patient who potentially benefits the most from an artificial urinary sphincter has a:

98 D 99 B 100 B 101 A 102 D 103 C

A. Noncompliant bladder with poor outflow resistance
B. Compliant bladder with good outflow resistance
C. Compliant bladder with poor outflow resistance
D. Noncompliant bladder with good outflow resistance *(CU 2645)*

104. AS-800 model prosthesis is:
A. An old styled artificial urinary sphincter
B. An artificial *in situ* penile prosthesis
C. A current model artificial sphincter that allows external activation and deactivation of the artificial sphincter
D. An artificial penile prosthesis made out of silicon

105. The artificial urinary sphincter cuff can be placed around the bladder neck in males and females or the bulbar urethra in males after puberty: Cuff placement at ____ is generally more effective:
A. Around the bladder neck
B. Around the bulbar urethra *(CU 2648)*

106. The first clinical use of small intestine to fashion a continent urinary reservoir was performed in 1911 by:
A. Lemoine
B. Cuneo
C. Giordano
D. T. Smith *(CU 2654)*

107. Urinary diversion by cutaneous ureterostomy is planned in a patient for some reason, and it is found that one ureter is dilated and the other is of normal calibre. Correct line of management would be:
A. The dilated ureter should be brought out as a single-barrelled stoma and the normal calibre ureter is managed by proximal transureteroureterostomy
B. The normal caliber ureter should be brought out as a 'rosebud' stoma and the dilated ureter is managed by distal transureteroureterostomy
C. Both the ureters should be brought to the anterior abdominal wall as a double-barrelled stoma
D. The medial aspect of both the ureters are spatulated for a distance of 4 cm anastomosed to each other and brought out as single-barrelled flush stoma *(CU 2659)*

104 C 105 A 106 B 107 A

108. Which of the following is a "gold standard" conduit against which all other urinary diversions should be compared?
A. Ileal conduit **B.** Ileocecal conduit
C. Colon conduit **D.** Jejunal conduit *(CU 2669)*

109. A variety of orthotopic voiding diversion procedures are there for the provision of urinary pouch of low pressure and high capacity that will accommodate to the collection of urine and allow the male patient to initiate voiding by ___ following cystopro-statectomy:
A. Crede maneuver
B. Valsalva's maneuver
C. Suprapubic manual compression
D. Listening to the sound of water falling from a tap
(CU 2683)

110. Which of the following is not adaptable to the female patient?
A. Orthotopic voiding cystoplasty
B. "Clam shell" ileal cystoplasty
C. Sigmoid cystoplasty
D. Ileocecal cystoplasty *(CU 2685 JIPMER)*

111. Which is the first continent urinary diversion employing the Microfanoff principle wherein the appendix serves as the continence mechanism?
A. Indiana pouch
B. Pernn pouch
C. Orthotopic Hemi-cock pouch
D. Mansson pouch *(CU 2715)*

112. Prevention of ureterovascular fistulae may be promoted by which of the following?
A. Avoidance of radiation therapy
B. Frequent stent changes
C. Treating ureteral strictures with open surgical techniques
D. Utilizing the softest stenting material possible
E. Judicious use of prophylactic antibiotics *(AUA 93-18)*

113. The most sensitive study in the diagnosis of enterovesical fistula is:
A. Enteral administration of activated charcoal
B. Flexible sigmoidoscopy
C. CT scanning
D. Cystography
E. Cystoscopy *(AUA 93-18)*

108 A 109 B 110 A 111 B 112 D 113 E

114. A patient with an indwelling ureteral stent and history of malignancy requiring prior radiation presents with copious bright red bleeding from the urinary tract and transient hypotension. The next step is:
A. Endoscopy to localise the bleeding
B. Immediate laparotomy
C. CT scanning of the abdomen
D. To remove the stent
E. Arteriography *(AUA 93-18)*

Prostate

115. During transvesical prostatectomy. If excessive bleeding occurs from the prostatic fossa, there are various techniques that are effective in controlling bleeding. One of them is the placement of no. 1 or no. 2 nylon pursestring suture around the vesical neck, and the suture is brought out through the skin and tied snugly. This is:
A. Described by malament
B. O'Connor technique
C. Described by Wilson Hey
D. Harris procedure *(CU 2856)*

116. Who described plication of the posterior capsule using chromic catgut on a 5/8 circle needle to control intraoperative bleeding from the prostatic fossa during transvesical prostatectomy?
A. O'Connor **B.** Harris
C. Millin **D.** Freyer *(CU 2856)*

117. Who is given credit for doing the first transurethral surgery to relieve bladder outlet obstruction in the 16th century?
A. Ambrose pare **B.** Nesbit
C. Nitze and Leiter **D.** George Wyeth *(CU 2900)*

118. Nesbit's is one of the standard techniques of doing TURP. This is divided into:
A. Five stages **B.** Four stages
C. Three stages **D.** Two stages *(CU 2906)*

119. In Nesbit's stage I, the resection of the prostate begins at the bladder neck, starting at the:
A. 12 O'clock position **B.** 6 O'clock position
C. 9 O'clock position **D.** 3 O'clock position *(CU 2910)*

120. The most common area of damage to the external urinary sphincter during TURP is at the:

114 B 115 A 116 A 117 A 118 C 119 A 120 D

A. 3 O'clock position **B.** 9 O'clock position
C. 6 O'clock position **D.** 12 O'clock position *(CU 2910)*

121. Hagstrom has calculated that the per minute absorption of the irrigating fluid by the patient daring TURP is approximately:
A. 10 ml **B.** 20 ml
C. 30 ml **D.** 40 ml *(CU 2912)*

122. Investigators have reported that approximately 300 ml of fluid per minute was needed for good visual field during TURP, and this could not be achieved when the fluid was below:
A. 60 cm **B.** 70 cm
C. 80 cm **D.** 90 cm *(CU 2912)*

123. The most common immediate postoperative complication of TURP is:
A. Infection **B.** Failure to void
C. Acute retention **D.** Hypotonic bladder *(CU 2913)*

124. The most common cause of urethral stricture, after TURP, is:
A. Postoperative urethral catheterisation
B. Urethritis
C. Probably trauma from the resectoscope
D. Extravasation of irrigation fluid *(CU 2913)*

125. About ___ per cent of patients with TURP will have retrograde ejaculation:
A. 70 **B.** 60
C. 50 **D.** 40
E. 30 *(CU 2914)*

126. The procedure of transurethral incision of the prostate seems to be most useful in:
A. Median bars **B.** Small sclerosed gland
C. Both A and B **D.** Glands below 40 g size *(CU 2915)*

127. Contraindication(s) to balloon dilatation of the prostate:
A. Enlarged median lobe
B. Bleeding disorder
C. Glands weighing more than 70 g
D. Renal stone disease *(CU 2917)*

128. At the time of balloon dilatation of the prostate, the surgeons select a — Fr. balloon, which is distended to 4 atm pressure within the prostatic fossa and left in place for 10 minutes:
A. 50 **B.** 60
C. 70 **D.** 80
E. 90 *(CU 2917)*

121 D 122 B 123 B 124 C 125 C 126 C 127 A 128 E

129. In radical prostatectomy, the pelvis endopelvic fascia should be incised:
A. Along the tendinous fascial arch of the pelvis (white line)
B. Lateral to the white line
C. Medial to the white line
D. Medial to the venous plexus
E. Lateral to the venous plexus *(AUA 94-4)*

130. The shape of the prostate is:
A. Conical **B.** Spherical
C. Crescent-shaped **D.** Doughnut-shaped
E. Variable *(AUA 94-5)*

131. Advantages of radical perineal prostatectomy include the following:
A. Easy access to the pelvic lymph nodes
B. Avoids the neurovascular bundles
C. Early ligation and division of the dorsal vein complex
D. Water-tight, tension-free anastomosis
E. Avoids the external striated sphincter *(AUA 94-5)*

132. When performing a radical perineal prostatectomy, Denonvilliers fascia:
A. Protects the dorsal vein complex
B. Separated from the prostate capsule
C. Separated from the rectal muscles
D. Is encountered before division of the rectourethralis muscle
E. Is encountered after division of the rectourethralis muscle *(AUA 94-5)*

133. When performing a radical perineal prostatectomy, the dorsal vein complex is encountered:
A. Just prior to the initial incision into the urethra
B. While separating the anterior from the posterior layer of Denonvilliers fascia
C. While separating the prostate from the lateral pelvic fascia
D. While transecting the rectourethralis muscle
E. Is not usually encountered *(AUA 94-5)*

134. During radical perineal prostatectomy, the rectum is at highest risk of injury when:
A. Developing the ischial-rectal fossa
B. Transsecting the central tendon
C. Separating the prostate from the lateral pelvic fascia
D. Establishing a plane between the rectum and the prostate/seminal vesicles
E. Exposing the anterior surface of the ampulla of the vas and seminal vesicles *(AUA 94-5)*

129 E 130 E 131 D 132 E 133 E 134 D

135. The preferred management of catheter loss on the fifth day after radical prostatectomy is:
A. Blind replacement of catheter
B. Observation
C. Placement of suprapubic cystotomy tube percutaneously
D. Retrograde urethrography and cystography
E. Endoscopic passage of a guidewire with coaxial placement of catheter *(AUA 94-6)*

136. A patient, seven days after radical prostatectomy, has more than 90 cc fluid draining through each Jackson-Pratt drain. The most important initial step is to:
A. Determine if the fluid is lymph or urine
B. Pull the drain back
C. Take the drain off the suction
D. Sclerose the drain tract
E. Inject the drain with contrast *(AUA 94-6)*

137. Rectal injury during radical retropubic prostatectomy:
A. Occurs in about 5 per cent of all radical prostatectomies
B. Can often be managed with primary closure
C. Is more common with stage A prostate cancer
D. Indicates pathologically advanced disease
E. Mandates diverting colostomy *(AUA 94-6)*

138. A patient eight weeks after radical prostatectomy, complains of decreased force of stream. Evaluation shows a bladder neck contracture. Preferred initial management is:
A. Balloon dilatation **B.** "Hot" loop incision
C. Office dilatation **D.** "Cold" knife incision
E. "Hot" loop resection *(AUA 94-6)*

139. Blood loss during radical retropubic prostatectomy:
A. Is higher in patients with stage C disease
B. May be minimised by careful isolation and ligation of the dorsal venous complex
C. Is not affected by the temporary occlusion of the hypogastric artery
D. Should not be replaced by autologous transfusion
E. Is not increased by using mini dose heparin
(AUA 94-6)

140. Thromboembolic complication can be minimised after radical prostatectomy by all of the following *except:*

135 E 136 A 137 B 138 C 139 B 140 C

A. Pneumatic compression of the lower limbs
B. Use of epidural anaesthesia
C. Restriction of ambulation in the early postoperative period
D. Mini-dose heparin administration
E. Active calf muscle exercises in the postoperative period
(AUA 94-6)

141. The incidence of bladder neck contracture after radical retropubic prostatectomy may be increased by all of the following *except:*
A. Extravasation of urine at the anastomotic site
B. Excessive intraoperative blood loss
C. Prior transurethral prostatic operation
D. Water-tight suture line at the anastomosis
E. Use of cautery to divide the bladder neck *(AUA 94-5)*

142. The most common reason for intervening in patients with bladder outlet obstruction secondary to BPH is:
A. Patient symptoms **B.** Haematuria
C. Recurrent infection **D.** Chronic urinary retention
E. Acute urinary retention *(AUA 94-18)*

143. Upper tract imaging in patients who will undergo a TURP should be done:
A. Routinely
B. To rule out incidental renal carcinoma
C. To assess post-void residual
D. To assess bladder trabeculation
E. In patients with a history of haematuria *(AUA 94-18)*

144. The amount of residual urine which indicates irreversible bladder damage is:
A. 40 ml **B.** 60 ml
C. 80 ml **D.** 100 ml
E. Unknown *(AUA 94-18 CMC)*

145. In the American urological association cooperative study the most common cause of death immediately following a TURP was:
A. Sepsis **B.** Myocardial infarction
C. TUR syndrome **D.** Pulmonary embolism
E. Pyelonephritis *(AUA 94-1)*

146. Patients who have been less than satisfied with TURP in the immediate postoperative period have usually been so because of:
A. Persistent or development of bladder irritative symptoms
B. Recurrent obstructive symptoms
C. Recurrent infection

141 D 142 A 143 E 144 E 145 A 146 A

D. Prostate growth
E. Recurrent bleeding

147. The highest percentage of patients who have relief of symptoms and the greatest magnitude of improvement in symptoms are those patients treated with:
A. Transurethral incision of the prostate
B. Balloon dilatation
C. Transurethral resection of the prostate
D. Finasteride
E. Alpha adrenergic blockers *(AUA 94-18)*

148. What is felt to be the optimum level of temperature for safely inducing irreversible changes in malignant cells but spares normal cells?
A. 45-47°C **B.** 47-49°C
C. 37-39°C **D.** 42-45°C
E. 39-41°C *(AUA 93-3)*

149. What is the treatment of choice for a healthy 70-year-old male with a 60 gm trilobar BPH with severe symptoms of prostatism and high residual urine?
A. TUDP and prostate stent
B. Prostate stent **C.** TUDP
D. TURP **E.** TUIP *(AUA 93-3)*

150. Transurethral laser induced prostatectomy (TULIP):
A. Uses laser energy in the 20 to 40 Watt range
B. Relieves bladder outlet obstruction by vapourising prostatic tissue
C. Is performed by using an Argon pulse dye laser
D. Is frequently associated with significant haemorrhage
(AUA 93-3)

151. The most accurate and simplest method of catheter placement for transurethral dilatation of prostate (TUDP) is:
A. Endoscopy
B. Digital palpation
C. Fluoroscopy
D. A combination of fluoroscopy and endoscopy
E. Transrectal ultrasound

152. Which of the following statements about TUDP is *true*?
A. Does not require any prophylactic antibiotic therapy
B. Can be performed using local anaesthesia
C. Is a painless procedure
D. Needs hospitalisation routinely
E. Needs general or spinal anaesthesia *(AUA 93-3)*

147 C 148 D 149 D 150 A 151 B 152 B

153. Which of the following statements is *true* about transurethral incision of the prostate (TUIP)?

A. Retrograde ejaculation is the same as after TURP
B. The incision is typically carried down to or through the capsule
C. TUIP is technically more difficult than TURP
D. TUIP is very useful in patients with prostate gland greater than 40 gm
E. Bladder neck contracture occurs more often with TUIP than with TURP *(AUA 93-3)*

154. Regarding TURP:

A. Remains the standard by which all forms of alternative therapy for BPH must be measured
B. This procedure is obsolete and should seldom be performed
C. Is technically more easier to perform than any surgical alternative that is currently available
D. Is universally successful and not associated with significant side effects *(AUA 93-3)*

155. The ideal patient for balloon dilatation of prostate is:

A. An older patient in urinary retention and an atonic bladder
B. A younger male with prostatism, bilobar prostate obstruction, concern about retrograde ejaculation with a small amount of residual urine
C. An elderly male with prostatism, large residual urine, bilobar prostate obstruction, not concerned about retrograde ejaculation
D. An elderly male with prostatism, concern about retrograde ejaculation, trilobar prostate obstruction, small residual urine
E. A younger male with prostatism, linearly prostate obstruction, large residual urine, not concerned about retrograde ejaculation *(AUA 93-3)*

156. Which of the following statements regarding microwave treatment of BPH is *true*?

A. The lower the frequency of microwave energy utilised, the greater is the depth of tissue penetration
B. Causes disruption of the bladder neck
C. Does not require any specialised equipment
D. Thermotherapy and hyperthermia are different terms for the same thing
E. Tissue changes are decreased lineraly with distance from the antenna *(AUA 93-3)*

153 B 154 A 155 B 156 A

157. Wu Chinich's instrument selectively fragment tissue high in water content while sparing those tissue with high collagen levels (such as prostatic capsule, bladder neck, and external sphincter). It is used in:

A. Transurethral laser induced prostatectomy
B. Transurethral ultrasonic aspiration of the prostate
C. Transurethral incision of the prostate
D. Transurethral resection of the prostate
E. Transurethral hyperthermia to the prostate *(AUA 93-3)*

Erectile Dysfunction

158. The stamp test, Snap Gauge band, and Rigiscan device all:

A. Are used to measure penile rigidity
B. Are used to measure penile rigidity during home nocturnal monitoring
C. Are very sensitive and specific methods to be utilised as singularly diagnostic tools of impotency
D. Are visual sexual stimulation tests *(CU 3037)*

159. The normal postintracavernosal injection (of vasoactive agents) values in potent patients are cavernosal artery diameter of __ and peak flow velocity of more than 30 cm/second:

A. 0.08 cm **B.** 0.03 cm
C. 0.05 cm **D.** 0.08 inch *(CU 3042)*

160. Under normal physiologic condition during equilibrium, the pudendal arterial inflow to the phallus is approximately:

A. 20 to 30 ml/minute
B. 3 to 5 ml/minute
C. 100 to 125 ml/minute
D. 10 to 15 ml/minute *(CU 3046)*

161. Currently, the only absolute contraindication to pharmacocavernosometry testing in the impotent patient is:

A. The patient who is receiving a monoamine oxidase inhibitor
B. The presence of peyronie's disease
C. The patient who is receiving a tricyclic antidepressant
D. The presence of Ladderhose's disease *(CU 3046 CMC)*

162. The agent of choice for radioisotope measurement of venous outflow in an impotent patient:

157 B 158 B 159 A 160 B 161 B 162 B

A. ^{133}Xe
B. ^{99m}Tc labelled autologous red blood cells
C. ^{123}I-MIBG
D. Indium-111 labelled granulocytes *(CU 3050)*

163. A site specific leak is noted in the dorsal vein at an abrupt location along the penile shaft on corporal veno-occlusive function test. This finding suggest which of the following as the etiology of impotency?
A. Penile fracture from coitus
B. Peyronie's disease
C. Previous defective penile surgery
D. Unresolved priapism *(CU 3050)*

164. All of the following have been used as nonhormonal medical therapy for impotency *except:*
A. Yohimbine **B.** Trazodone
C. Guanethidine **D.** Nitroglycerin *(CU 3053)*

165. Intracavernosal pharmacotherapy with this agent has been associated with hepatotoxicity:
A. Papaverine **B.** Trazodone
C. Guanethidine **D.** Phenoxybenzamine *(CU 3057)*

166. Burning pain at the time of injection during PIPE has been seen most commonly with:
A. Papaverine **B.** Phentolamine
C. Prostaglandin E_1 *(CU 3056)*

167. Corporal veno-occlusive dysfunction may be said to exist if flow rates to maintain various intracavernosal pressure are ____ under conditions of presumed smooth muscle relaxation:
A. Decreased - lesser than 3 ml/minute
B. Elevated - greater than 3 ml/minute
C. Elevated - greater than 6 ml/minute
D. Decreased - lesser than 1 ml/minute *(CU 3079)*

168. Ways to minimise autoinflation occurring with 3-piece inflatable penile implants include all of the following *except:*
A. Putting less fluid in the reservoir
B. Using a lock-out mechanism on the pump to prevent flow of fluid through the system
C. Frequent complete deflation of the device
D. Assuring that the reservoir cavity is adequate in volume so it will not restrict reservoir expansion
E. Removing the pseudocapsule from around the reservoir
(AUA 94-27)

163 A 164 C 165 A 166 C 167 B 168 E

169. A sign of penile prosthesis infection which will mandate surgical exploration is:

A. Increased purulent drainage from the wound upon compressing a prosthesis part
B. Elevated WBC count and/or sedimentation rate
C. Persistent pain
D. Erythema
E. Fever *(AUA 94-27)*

170. Erosion of penile implant cylinders:

A. Occurs more commonly with hydraulic type devices
B. Is seen more often in patients with poor penile sensitivity
C. Is usually managed by removing the implant, closing the defect, and replacing the cylinder at the same procedure
D. Is seen less often when urethral catheterisation is used
E. Is always treated by removal of the entire implant *(AUA 94-27)*

171. The most common organism associated with prosthetic infections are:

A. Conforms **B.** Anaerobes
C. *Pseudomonas* **D.** Fungi
E. *Staphylococcus epidermidis* *(AUA 94-27)*

172. Which is not a normal occurrence after penile prosthesis implantation?

A. A five to ten per cent mechanical failure
B. A shorter penis
C. Modest pain for 3 or 4 weeks
D. Decreased penile sensitivity
E. Loss of ejaculation *(AUA 94-27)*

173. A salvage or rescue procedure in a patient who has been implanted with a penile prosthesis is least likely to be successful in a situation of:

A. Purulent corporal infection in a patient with diabetes mellitus
B. A patient whose wound has exuded purulent drainage for two weeks
C. Eroded prosthesis pump
D. Exposed prosthetic tubing
E. An obese patient *(AUA 94-27)*

169 A 170 B 171 E 172 E 173 A

Others

174. Suprapubic tube drainage should be avoided in bladder cancer to prevent tumour implantation along the tube tract. This is:
A. False now-a-days **B.** True *(CU 2750)*

175. Radical cystectomy in male implies en bloc removal of the bladder with its peritoneal covering and:
A. Urachal remnant up to the umbilicus, perivesical adipose tissue, lower ureters, prostate gland, seminal vesicles, pelvic vas deferens, and its ampulla, and pelvic lymph nodes
B. Lower ureters, prostate gland, seminal vesicles, pelvic vas deferens, and pelvic lymph nodes
C. A and removal of the urethra in continuity with the radical cystectomy specimen
D. Perivesical adipose tissue and B *(CU 2751)*

176. Which of the following is/are indication(s) for removal of the urethra in continuity with the radical cystectomy specimen?
A. Multicentric carcinoma of the bladder
B. Primary carcinoma *in situ*
C. Involvement of the bladder neck by cancer
D. Involvement of the prostatic urethra by cancer
E. All of the above *(CU 2751)*

177. The most common cause of colovesical fistula is:
A. Diverticular disease of the colon
B. Colon cancer
C. Crohn's disease
D. Radiation enteritis
E. Trauma
F. Bladder cancer *(CU 2772)*

178. In TRUS, the verumontanum, is characteristically seen as a ___ structure in the midline at the termination of the ejaculatory ducts:
A. More densely echoic **B.** More echopenic
C. Isoechoic **D.** Heteroechoic *(CU 2945)*

179. The primary tumours of the seminal vesicles are commonly — and tend not to be contiguous with the prostate:
A. Bilateral **B.** Unilateral *(CU 2945)*

174 A 175 A 176 E 177 E 178 A 179 B

180. The treatment of choice of seminal vesicle cancer is:
A. Radical prostatectomy
B. Radical vesiculoprostatectomy
C. Radical excision including cystoprostatectomy with pelvic lymphadenectomy
D. Radical seminal vesicle excision sparing pelvic lymph nodes
(CU 2949)

181. Inclusion of which of the following layers of the skin limits the potential for contraction after grafting?
A. Reticular dermis **B.** Stratum spinosum
C. Stratum malpighii **D.** Stratum mucosum
E. Papillary dermis *(CU 2957)*

182. Lacuna of morgagni are:
A. The glands of Littre
B. Remnants of Cowper's glands
C. Small diverticula of the glands of Littre
D. Situated in the dorsal wall of the fossa navicularis
(CU 2961)

183. The septum between the two halves of the scrotum is formed by the projection of:
A. Dartos fascia **B.** Colles' fascia
C. Buck's fascia **D.** Fascia of Scarpa *(CU 2964)*

184. The congenital urethral diverticula of male are demonstrated by:
A. Voiding cystourethrography
B. Cystoscopy
C. Retrograde urethrography
D. All of the above
E. B and C *(CU 2971)*

185. Today, most urethral strictures are caused by:
A. Instrumentation
B. Gonococcal urethritis
C. External trauma
D. Urethritis caused by chlamydia and ureaplasma *(CU 2983)*

186. Both ends of the male urethra can survive its being divided at any point because:
A. Of a dual blood supply
B. The distal segment gets supply from arteries of the bulb
C. The dorsal artery of penis is usually spared
D. All of the urethral blood supply comes from the branches of the pudental artery *(CU 2988)*

180 C 181 A 182 C 183 A 184 E 185 C 186 A

187. All of the following are different techniques of repair of urethral strictures *except:*
A. Orandi flap repair **B.** Duckett flap repair
C. Quartey flap repair **D.** Rosen's flap repair *(CU 2991-93)*

188. As defined by which fascial layer of the penis is involved, there are five types of chordee without hypospadias. 'Normal urethra and spongiosum but abnormal Buck's and Dartos fascia' comes under:
A. Class I **B.** Class II
C. Class III **D.** Class IV
E. Class V *(CU 3007)*

189. Find the odd man out:
A. Dupuytren's contracture
B. Ledderhose's disease
C. Peyronie's disease
D. Tympanosclerosis
E. Fabry's disease *(CU 3011)*

190. Calcification in the plaque of Peyronie's disease:
A. Is a sign of the end stage of the healing process
B. Is a sign of the activeness of the disease
C. Shows that treatment is no longer going to be successful
D. Its presence signifies the correct timing of surgery (corrective) *(CU 3013)*

191. Which of the following has been found to resolve or improve or making Peyronie's disease static with continuing function in two-thirds of the patients?
A. p-aminobenzoate **B.** Dimethyl sulfoxide (DMSO)
C. Terfenadine **D.** Vitamin E *(CU 3013)*

192. The sentinel node is located:
A. At the sephanofemoral junction
B. Within the space bounded by superficial epigastric and external pudendal veins
C. Within the space bounded by femoral and superficial circumflex iliac veins
D. Within the space bounded by superficial circumflex iliac and lateral superficial femoral veins *(CU 3079)*

193. Catalona's modified groin lymphadenectomy differs from the standard radical ilioinguinal groin dissection in all of the following *except:*

187 D 188 B 189 E 190 A 191 D 192 B 193 B

A. The node dissection is limited, excluding regions lateral to the femoral artery and caudal to the fossa ovalis
B. The transposition of the sartorius muscle is the sole feature
C. The saphenous veins are preserved
D. The skin incision is shorter *(CU 3082)*

194. Which of the following distorts the testicular histology and should not be used for testis biopsy?
A. Formalin **B.** Zenker's
C. Bouin's
D. Collidine buffered glutaraldehyde solution

195. The procedure of vasectomy should be repeated if sperm are found in the ejaculate ___ months after vasectomy:
A. Three **B.** Six
C. Nine **D.** Twelve *(CU 3124)*

196. Of the following laser wavelengths, the one not transmitted by flexible surgical laser fibres is:
A. CO_2 **B.** Alexandrite
C. Argon **D.** KTP-532
E. Nd:YAG *(AUA 94-15)*

197. Contact fibers improve tissue vapourisation by increasing:
A. Power **B.** Duration
C. Energy density **D.** Penetration depth
E. Absorption *(AUA 94-19)*

198. Selective absorption by body pigments occurs with which of the following lasers?
A. Alexandrite **B.** KTP-532
C. Holmium **D.** CO_2
E. Nd:YAG *(AUA 94-15)*

199. The primary toxicity of the derivative of the photodynamic therapy is seen in the:
A. Liver **B.** Lungs
C. Kidney **D.** Eye tract
E. Skin *(AUA 94-15)*

200. A 320 micron diameter fibre is preferable to a smaller fibre for treatment of ureteral stones with a pulsed dye laser because of:
A. Less potential of ureteral injury
B. More effective stone fragmentation
C. More efficient energy transmission
D. Improved tactile feedback
E. Improved flexibility *(AUA 94-15)*

194 A 195 A 196 A 197 C 198 C 199 E 200 B

201. A wavelength of 532 nm is emitted by which of the following lasers?
A. Holmium:YAG **B.** Neodymium:YAG
C. Carbon dioxide **D.** KTP
E. Rhodamine-Bi *(AUA 94-15)*

202. The TULIP (transurethral laser induced prostatectomy) system combines a side firing Nd:YAG laser, a balloon dilator, and:
A. Cystoscopic visualisation
B. 90° beam divergence
C. Transrectal ultrasonography
D. Transurethral ultrasonography
E. Interstitial temperature measurement *(AUA 94-16)*

203. Compared to electrocautery TUR, treatment of bladder outlet obstruction from benign prostatic hyperplasia with a side firing Nd:YAG laser is associated with an increased risk of postoperative:
A. Bleeding **B.** Impotence
C. Incontinence **D.** Retention
E. Stricture *(AUA 94-16)*

204. Laser treatment of superficial bladder cancer decreases the risk of:
A. Obturator nerve injury
B. Tumour recurrence
C. Bleeding
D. Tumour progression
E. Infection *(AUA 94-16)*

205. Eight hours after Nd:YAG laser treatment of a papillary bladder tumour, a 68-year -old male develops abdominal pain, and signs of peritoneal irritation. A KUB shows free air under the diaphragm. The next best step is:
A. Exploratory laparotomy
B. Laparoscopy
C. Cystoscopy
D. Antibiotics and observation
E. Cystogram *(AUA 94-16)*

206. Tissue vaporisation with a Nd:YAG laser can be increased by:
A. Cooling the tissue surface
B. Decreasing the area (spot size)
C. Using a widely divergent beam
D. Prolonging duration
E. Decreasing power *(AUA 94-16)*

201 D 202 D 203 D 204 C 205 A 206 B

207. The preferred treatment for recurrent bleeding from a benign hemangioma located on the bladder trigone is:
A. Nd:YAG laser coagulation
B. Contact laser vaporisation
C. Partial cystectomy
D. Arterial embolisation
E. Transurethral electrocautery resection *(AUA 94-16)*

208. The most common problem associated with internal spermatic venography and embolisation is:
A. Failure to occlude the varicocele
B. Migration of the balloon or coil
C. Injury to the testicular artery
D. Hydrocele formation
E. Recurrent varicocele formation *(AUA 94-10)*

209. Following correction of a large varicocele to a smaller varicocele, the relative improvements in semen quality and fertility rates can be described as:
A. Greater improvement in semen quality with higher pregnancy rates
B. Greater improvement in semen quality with similar pregnancy rates
C. Similar improvement in semen quality with similar pregnancy rates
D. Similar improvement in semen quality with higher pregnancy rates
E. Lesser improvement in semen quality with lesser pregnancy rates *(AUA 94-10)*

210. Which of the following technical approaches is least applicable is the repair of varicoceles?
A. Scrotal **B.** Inguinal
C. Retroperitoneal **D.** Laparoscopic
E. Radiologic

211. When performing an inguinal varicocelectomy, which layer is encountered directly enveloping the spermatic cord?
A. The aponeurosis of the external oblique muscle
B. Scarpa's fascia
C. The internal spermatic fascia
D. The transversalis fascia
E. The cremasteric muscle *(AUA 94-10)*

212. The best method for managing a recurrent varicocele is:

207 A 208 B 209 B 210 A 211 C 212 E

A. Scrotal **B.** Inguinal
C. Retroperitoneal **D.** Laparoscopic
E. Radiologic *(AUA 94-10)*

213. All of the following agents can safely be used for embolisation of the varicocele *except:*
A. Inflatable balloons
B. Ethanol
C. Papaverine
D. Gianturco coils
E. Coils combined with sclerosing agents *(AUA 94-10)*

214. The best prognostic factor when performing a vasovasostomy is:
A. Presence of sperm in the vas fluid
B. Vasectomy less than 10 years prior
C. Watery vas fluid
D. Creamy vas fluid
E. Presence of a sperm granuloma *(AUA 94-11)*

215. A 24-year-old male presented with a two- year history of primary infertility and findings of azoospermia on two semen analysis performed by his wife's gynecologist. A review of these reports indicates that he had a volume of semen of 3.5 cc and a qualitatively positive fructose test. His past medical history revealed that he had bilateral inguinal herniorrhaphies as a child. His physical examination was unremarkable and his FSH, LH and testosterone levels were normal. The next step in his evaluation would be:
A. A quantitative fructose test
B. A testicular biopsy
C. A vasogram
D. Direct epididymal sperm aspiration and *in vitro* fertilisation
E. An inguinal vasovasostomy *(AUA 94-11)*

216. Which of the following statements is *true* about vasovasostomy?
A. Free-hand, loupe magnification and microscopic magnification are equally useful in vasectomy reversal procedure
B. Absence of sperm in the intraoperative vas fluid indicates the presence of epididymal obstruction
C. After nine years following a vasectomy, microscopic reconstruction should be by way of a vasoepididymostomy
D. The one-layer and two-layer microsurgical techniques are associated with equal pregnancy rates
E. Fibrin glue and laser assisted techniques decrease granuloma formation and improve patency rates *(AUA 94-11)*

213 C 214 C 215 B 216 D

217. Almost all patients with cystic fibrosis have bilateral congenital absence of the Vas deferens. A primary genital phenotype of this disorder without pulmonary manifestations has been described that consists of:

A. Testicular and epididymal cysts
B. Absence of the caput epididymis
C. Renal anomalies including unilateral agenesis
D. Immotile cilia syndrome *(AUA 94-11)*

218. The human fetal gubernaculum is composed of:

A. Fibrous tissue **B.** Striated muscle
C. Smooth muscle **D.** Mesenchyme
E. Elastin *(AUA 94-12)*

219. The advantage of two-layer anastomosis during vasostomy compared to a modified one-layer anastomosis is primarily:

A. Improved mucosal apposition
B. Greater tensile strength
C. Decreased operating time
D. Improved hemostasis
E. None of the above

220. Vasoepididymostomy may be indicated in each of the following circumstances *except:*

A. As a primary reconstruction after vasectomy
B. Following a failed vasovasostomy
C. For rete testis obstruction
D. For primary epididymal obstruction
E. Following iatrogenic bilateral vas ligation *(AUA 94-11)*

221. Reports of epididymal sperm aspiration in combination with *in vitro* fertilization techniques have shown that:

A. Sperm must pass through the epididymis to gain motility
B. Sperm from the caput epididymis may have fertilising capability
C. Pregnancy is now possible for majority of men born with congenital absence of the vasa deferentia
D. Development of an alloplastic spermatocele is no longer necessary
E. These methods are satisfactory alternatives to vasovasostomy *(AUA 94-11)*

222. Ejaculatory duct obstruction is usually associated with each of the following *except:*

A. Low semen volume
B. Normal gonadotropins

217 C 218 D 219 A 220 A 221 B 222 D

C. Palpable vasa deferentia
D. Presence of fructose in the seminal fluid
E. Enlargement of the prostate *(AUA 94-11)*

223. A rapidly expanding hematoma after orchiectomy should be treated by:
A. Surgical exploration through the inguinal canal
B. Surgical exploration through the retroperitoneal route
C. Firm compression and application of an ice pack
D. Surgical exploration through the scrotum
E. Percutaneous drainage *(AUA 94-25)*

224. The best way to isolate the vas deferens at the time of vasectomy is to:
A. Grasp the vas with a towel clip before making the skin incision
B. Isolate the vas with two hemostats after making the skin incision
C. Incise the skin, and then isolate the vas with an Allis clamp
D. Deflect the testis cauded before making the skin incision
E. Use of percutaneous suture beneath the vas *(AUA 94-25)*

225. If a small amount of excess skin is inadvertently removed at the time of circumcision, the defect should be:
A. Allowed to granulate partially, and then covered with a split thickness skin graft
B. Covered immediately with a split thickness skin graft
C. Covered immediately with a full thickness skin graft
D. Left alone to granulate spontaneously
E. Covered with scrotal graft *(AUA 94-25)*

226. The major risk of epididymectomy is:
A. Leakage of sperm and subsequent sperm granulomata
B. Ligation of the vas deferens
C. Persistent orchalgia
D. Ligation of the testicle
E. Injury to spermatic vessels *(AUA 94-25)*

227. Clinically detectable sperm granulomata occur in what percentage of patients following vasectomy:
A. 15 **B.** 30
C. 45 **D.** 60
E. 90 *(AUA 94-25)*

228. Which of the following is advisable during circum-cision?
A. Reapproximation of the skin edges with absorbable continuous sutures
B. Application of a tight pressure dressing following surgery

223 A 224 D 225 D 226 E 227 A 228 C

C. Placement of a tourniquet around the base of the penis
D. Use of electrical cautery to control large vessels
E. Use of epinephrine with the local anesthesia *(AUA 94-25)*

229. The most effective means of compressing the scrotum after scrotal surgery is to:
A. Apply a compressive dressing taped to the abdomen and perineum
B. Suture the scrotum to the groin over a gauze roll
C. Apply a well padded athletic supporter
D. Apply a scrotal supporter
E. Scrotal wrap *(AUA 94-25)*

230. The stated advantage of retroperitoneal approach of varicocele ligation is:
A. Decreased risk of injury to the spermatic artery or vas deferens
B. Easier exposure, particularly in muscular patients
C. Decreased bleeding
D. Decreased surgical time
E. Decreased infection *(AUA 94-25)*

231. Adult circumcision is best performed using the:
A. Combined dorsal and ventral slit technique
B. Gomco clamp
C. Sleeve resection technique
D. Dorsal slit technique
E. Straight clamp and cautery *(AUA 94-25)*

232. All of the following are contraindications for using external pneumatic compression *except:*
A. Severe dermatitis
B. Abnormalities of leg percluding fit
C. Recent skin graft
D. Massive leg edema
E. Severe atherosclerosis
F. Diabetes mellitus
G. Presence of deep vein thrombosis *(AUA 94-25)*

233. The key factor preoperatively required for effectively using the MAGPI is:
A. Mobility of glans wings
B. Mobility of distal urethra
C. Mobility of midshaft skin
D. Fixation of dorsal meatus to corona
E. Mobility of dorsal prepuce for ventral cover *(AUA 93-17)*

229 B 230 A 231 C 232 F 233 B

234. The key to success of the MAGPI:
- **A.** Generous glans wings mobilisation
- **B.** Mobilisation of the distal anterior urethra
- **C.** Avoiding meatal regression by solid glans reapproximation ventrally
- **D.** Dorsal tunica tucks to correct chordee
- **E.** Deep glans groove split and resurfacing *(AUA 93-17)*

235. The MIP variant of hypospadias is:
- **A.** The most common anterior variant of hypospadias
- **B.** Best managed by flip-flap procedure
- **C.** Best managed by Mathieu procedure
- **D.** Megameatus intact prepuce
- **E.** Probably a circumcision injury *(AUA 93-17)*

236. Bladder mucosa graft urethroplasty:
- **A.** Is better used in redo cases that can be closed in two stages
- **B.** Is limited in length by bladder size
- **C.** Is more 'fluid' and has a tendency to evert at the meatus causing irritation
- **D.** Is much thicker than skin or buccal mucosa
- **E.** Is an optimal urethral replacement for primary cases done at six months of age *(AUA 93-17)*

237. Buccal mucosa graft urethroplasty:
- **A.** May be better than skin since it has such abundant sensation
- **B.** Is a problem due to infection from mouth organism
- **C.** Is much thinner than bladder mucosa or skin
- **D.** Can be harvested from the palate as well as lips and cheeks
- **E.** Is thicker than bladder mucosa and does not evert the meatus as easily *(AUA 93-17)*

238. The urethral plate:
- **A.** Overlies the fibrous tissue causing chordee
- **B.** Has normal spongiosum beneath it
- **C.** May often be preserved and utilised in the urethroplasty portion of the repair
- **D.** Has a poor blood supply and is likely to cause ventral curvature later in life
- **E.** May be tubularised as a flap urethroplasty and channelled through the glans *(AUA 93-17)*

239. The transverse preputial island flap tubed urethroplasty:
- **A.** Has to be transposed to the ventrum through a button-hole in the pedicle

234 C 235 A 236 C 237 E 238 C 239 B

B. Provides a very healthy healing urethra even if the skin cover ventrally sloughs and re-epithelializes
C. Is often too short to form the urethral replacement
D. Permits correction of penoscrotal transposition at the same time due to abundant blood supply left in the dorsal skin
E. Is better supported if the outer skin is left attached to give more secure results *(AUA 93-17)*

240. Which metal is used to coat the prostocath?
A. Silver **B.** Zinc
C. Stainless steel **D.** Gold super alloy
E. Titanium *(AUA 93-4)*

241. A patient is unable to void following insertion of a urethral stent. The treatment of choice is to:
A. Give carbacol
B. Remove the stent
C. Pass a urethral catheter
D. Insert a suprapubic catheter
E. Treat with half alpha blockade *(AUA 93-4)*

242. The most common side effect following insertion of an urethral stent is:
A. Hemospermia **B.** Pneumaturia
C. Impotence **D.** Antegrade ejaculation
E. Urinary infection **F.** Postmicturition dribbling
(AUA 93-4)

243. Which of the following therapies for bladder outlet obstruction secondary to BPH is most likely to produce objective evidence of benefit similar to that of a transurethral resection?
A. 5 alpha reductase inhibitor
B. Balloon dilatation
C. LHRH analogues
D. Prostatic stent
E. Hyperthermia *(AUA 93-4)*

244. The most common early side effect following stent insertion for BPH is:
A. Incontinence
B. Haematuria
C. Frequency, urgency, dysuria
D. Acute retention
E. Urinary infection *(AUA 93-4)*

240 D 241 D 242 F 243 D 244 C

245. Which material currently used in manufacturing of urinary stents is most likely to develop encrustation as evidenced from *in vitro* studies X?

A. Stainless steel super alloy
B. Gold
C. Stainless steel wire
D. Titanium
E. Polyurethane *(AUA 93-4)*

246. Which of the following is a contraindication for a stent in patients with detrusor sphincter dyssynergia?

A. Bladder stones
B. An artificial urinary sphincter
C. Urinary infection
D. Need for further endoscopy
E. Bladder diverticula *(AUA 93-4)*

247. Escharotomy in an extremity is best performed in which plane(s)?

A. Ventral **B.** Dorsal
C. Transverse **D.** Medial and lateral
E. Over neurovascular strictures *(AUA 95-4)*

248. When deep scrotal burns cause testicular exposure, the best initial management is testicular coverage by:

A. Split thickness skin grafts
B. Full thickness skin grafts
C. Mycocutaneous flaps
D. Wet to dry gauze bandages
E. Implantation into a thigh pouch *(AUA 95-4)*

249. A 30-year-old man suffers a full thickness burn to the perineum, scrotum, and penis. The testis are normal by radioisotopic flow study. The optimal treatment in this patient includes:

A. Colostomy and full thickness skin grafting to the burned areas
B. Colostomy and application of mafenide acetate to burned areas with re-evaluation over three to six weeks
C. Excision of full thickness burns, colostomy, and wound coverage with full and split thickness skin grafts
D. Application of topical burn creams with re-evaluation for skin grafting over three to six weeks
E. Excision of full thickness burns and coverage with split thickness skin grafts within three days post- burn *(AUA 95-4)*

245 D 246 D 247 D 248 E 249 D

250. You are consulted by a burn center to see a newly admitted patient with burns to the anterior scrotum and penis. On examination, the patient is uncircumcised, and the entire phallus was burned and the dorsum has a full thickness burn. The urethral meatus, although burned, is visible. Your recommendation for management of urinary tract during resuscitation includes:

A. Placement of Foley catheter
B. Placement of suprapubic catheter
C. Perineal urethrostomy and placement of Foley catheter
D. Penile escharotomy and placement of Foley catheter
E. Placement of condom catheter *(AUA 95-4)*

251. The Palomo procedure involves which of the following?

A. A low, inguinal approach
B. Ligation of the internal spermatic vein and artery
C. Sparing the internal spermatic artery
D. Easy access to the external spermatic vein
E. High likelihood of vas deferens injury *(AUA 95-14)*

252. In varicocele treatment, procedures vary in technical difficulty and can be unsuccessful. The technical failure rate in varicocele ablation is highest with which of the following methods?

A. Retroperitoneal (high) incisional repair
B. Inguinal incisional repair
C. Sublinguinal incisional repair
D. Percutaneous ablation
E. Laparoscopic ligation *(AUA 95-14)*

253. Which of the following is most suggestive of stenosis of a vesicostomy stoma?

A. Bacteriuria **B.** Skin rash
C. Small stomal size **D.** Moderate residual urine
E. Recurrent pyelonephritis *(AUA 95-16)*

254. Pronounced eversion of the stomas differs from prolapse in the following way:

A. Prolapse may incarcerate and require emergency surgery to reduce
B. Prolapse is the large epithelialised stoma common with VUR
C. Pronounced eversion is due to chronic skin irritation and encrustation
D. Pronounced eversion required resection of the protruding bladder when stoma is compressed
E. Prolapse is treated by widening the fascial defect after reduction *(AUA 1995-16)*

250 D 251 C 252 D 253 E 254 A

255. The following are common finding with vesicostomy *except:*
A. Skin rash due to urine irritation
B. Asymptomatic bacteriuria
C. Stoma encrustation with proteus overgrowth
D. Residual urine by catheter
E. Sterile urine cultures *(AUA 95-16)*

256. Which is the most significant clinical improvement appreciated after vesicostomy?
A. Avoids CIC
B. Less bacterial colonization
C. Lower incidence of pyelonephritis
D. Use of appliance to collect urine
E. Fewer skin rashes *(AUA 95-16)*

257. The most common complications of vesicostomy includes all of the following *except:*
A. In myelomeningocele, stomal stenosis in 12 per cent and prolapse in five per cent
B. In prune-belly syndrome, stomal stenosis in 40 per cent
C. In VUR, stomal stenosis in 25 per cent, prolapse in 40 per cent
D. In posterior urethral valves, persistent obstruction at the UVJ
E. Low incidence of cystolithiasis *(AUA 95-16)*

258. Dorsal rhizotomy of S_{3-4} would least likely affect:
A. Detrusor contractility **B.** Erection
C. Perineal sensation **D.** Bowel contractility
E. Prostate fluid volume *(AUA 95-17)*

259. Smokers are at increased risk for both pulmonary and cardiac perioperative complications. They should discontinue smoking at least _____ weeks before surgery to optimize their pulmonary function:
A. 4 **B.** 6
C. 8 **D.** 12 *(CU 7 138)*

260. Prophylactic administration of _____ greatly reduces the potential risk of acute alcohol withdrawal during postoperative period, which can be life-threatening:
A. Lorazepam **B.** Phenyton
C. Alprazolam **D.** Estrogen *(CU 7 138)*

261. It is technically sound and safe to gain access into the collecting system through a posterior middle or lower pole calyx because the _____ between the inserted needle or wire and the calyceal infundibulum facilitates the manipulations:

255 E 256 C 257 A 258 E 259 A 260 C 261 A

A. Obtuse angle **B.** Acute angle
C. 180° angle **D.** 360° angle *(CU 7 239)*

262. Ureteral stents usually need to be changed/replaced every _____ months:
A. 1-2 **B.** 2-3
C. 3-4 **D.** 3-5 *(CU 7 250)*

263. Oddly, in most of the instances the area of narrowing of the ureter readily permits the passage of no. 5 or no. 6 French ureteral catheter. This is considered a _____ feature of retroperitoneal fibrosis:
A. Constant **B.** Characteristic
C. Rare **D.** Baseless *(CU 7 406)*

264. Eighty to ninety per cent of retroperitoneal lymphoceles form within ____ weeks after pelvic/retroperitoneal lymphadenectomy:
A. One **B.** Three
C. Six **D.** Twelve *(CU 7 416)*

265. Who established the modern method of vascular suturing at the turn of 20th century, and he was awarded the Nobel prize in 1912?
A. Correl **B.** Hamilton
C. Reid **D.** Collins *(CU 7 507)*

266. After allograft nephrectomy which of the following drugs is withdrawn immediately?
A. Cyclosporine **B.** Azathioprine
C. Prednisone **D.** Tacrolimus *(CU 7 524)*

267. After renal plantation urinary extravasation often require open surgical repair. Which of the following is discontinued?
A. Cyclosporine **B.** Azathioprine
C. Prednisone **D.** Mycophenolate mofetil
(CU 7 585)

268. Treatment with which of the following drugs seems effective prophylactically in decreasing the incidence of postoperative urinary retention?
A. Phenoxybenzamine (POB)
B. Prazocin **C.** Terazocin
D. Doxazocin **E.** Only A and B
F. None of the above *(CU 7 970)*

262 C 263 B 264 B 265 A 266 A 267 B 268 A

269. At the completion of transurethral resection of the bladder tumour, the irrigation be:
A. Should be crystal clear
B. Should be light pink
C. Should be only red tinsed
D. Should contain tiny clots *(CU 7 1524)*

270. Not a contraindication for open prostatectomy:
A. A small prostate gland
B. A previous prostatectomy
C. Any type of prostate cancer
D. Previous pelvic surgery
E. Co-existing uni/bilateral inguinal hernia *(CU 7 1529)*

271. All of the following statements are true *except:*
A. It is recommended that varicocele repair be performed in adolescents with grade II or III varicoceles associated with ipsilateral testicular growth retardation
B. For couples wishing to proceed with immunosuppressive therapy for immunogenic infertility, an intermediate cycle steroid is recommended
C. The most serious complication associated with testis biopsy is inadvertant biopsy of the epididymis
D. Varicelectomy should always be performed at the same time as vasovasostomy, or vasoepididymostomy
(CU 7 1313-1348)

272. In the endoscopic management of posterior urethral valves, a single wire/electrode is used to incise the valve at 4, 8, and 12 O'clock position, out of which _____ is the most important incision:
A. 6 O'clock **B.** 8 O'clock
C. 12 O'clock *(CU 7 2080)*

273. The approaches to the prostate in radical perineal prostatectomy vary only in how they traverse the external rectal sphincter. Which is the most direct route approach although the other approaches provide early visualisation of the longitudinal fibers of the rectum, a useful landmark?
A. Belt **B.** Hudson
C. Young **D.** Denonvillier's *(CU 7 2593)*

274. The most common source of troublesome bleeding during right adrenalectomy:
A. Inferior phrenic artery
B. Right renal artery

269 A 270 E 271 D 272 C 273 C 274 D

C. Abdominal aorta
D. Common adrenal vein *(CU 7 2917)*

275. Which approach is commonly used for patients with pheochromocytomas, for pediatric patients and for some patients with adrenal carcinoma?
A. Transabdominal **B.** Thoracoabdominal
C. Flank **D.** Modified posterior *(CU 7 2960)*

276. Hypothermic circulatory arrest can be safely maintained for at least ____ minutes without incurring a cerebral ischemic event during radical nephrectomy with intrahepatic or suprahepatic vena caval involvement of renal cell carcinoma?
A. 50 **B.** 40
C. 30 **D.** 20 *(CU 7 3002)*

277. Patients with ureteral strictures of greater than ___ cm in length have a significant risk of restenosis after endopyelotomy and are more appropriate candidates for open pyeloplasty:
A. 4 **B.** 3
C. 2 **D.** 1 *(CU 7 3066)*

278. It is the simplest type of urinary diversion to perform and is associated with the fewest number of intraoperative and immediate postoperative complications:
A. Ileal conduit **B.** Jejunal conduit
C. Colon conduit *(CU 7 3146)*

279. Ammoniagenic coma in patients with urinary intestinal diversion has been reported in those with:
A. A serum creatinine of greater than 2 mg/dl
B. Radiation enteritis
C. Inflammatory bowel disease
D. Cirrhosis *(CU 3154)*

280. Skin graft occurs in two phases; imbibition and inosculation. The initial phase imbibition lasts ____ hours:
A. 24 **B.** 48
C. 72 **D.** 96 *(CU 7 3317)*

281. A graft harvested at greater than 0.002 to 0.0022 inch is considered to be _____:
A. Thick split-thickness skin graft
B. Medium split-thickness skin graft
C. Full-thickness skin graft
D. Thin split-thickness skin graft *(CU 7 3317)*

275 A 276 B 277 C 278 A 279 D 280 B 281 A

282. A flap that is dependant on the subdermal and intradermal plexus for survival is:
A. A random flap
B. An axial flap
C. A direct cuticular flap
D. A fasciocutaneous flap *(CU 7 3319)*

283. In laparoscopic procedures pneumoperitoneum is usually established using CO_2 because it is cold, does not support combustion, and very soluble in blood. LD_{50} for CO_2 is 1750 ml; that of air is___.
A. 157 ml **B.** 357 ml
C. 457 ml **D.** 257 ml *(CU9-178)*

284. For the discussion of trauma and reconstruction, it is the consensus opinion of WHO conference (2002) that the common use of terms anterior and posterior urethra be departed from and the urethra be subdivided in ___ separate areas.
A. Three **B.** Five
C. Four **D.** Six *(CU9-1028)*

285. Use of de-epithelialised penile skin as paddle carried on the dartos fascia in surgical management of Peyronie's disease has been reported by:
A. Krishnamurti (1995) **B.** Knoll (2001)
C. Hellstorm (1994) **D.** Das and Amar (1982) *(CU9-830)*

286. ___ procedure is regarded as the most effective distal shunt in surgical management of ischemic priapism.
A. Winter **B.** El-Ghorab
C. Quackels **D.** Sacher
E. Grayhack *(CU9-848)*

287. Who performs a correction/straightening of penile deformity in Peyronie's disease in which he omits the excision of the tunica albuginea and merely
A. Lue **B.** Krishnamurti
C. Pryor **D.** Lockhart

288. Percutaneous transluminal angioplasty is performed in cases of ___ stent placement and has become the primary modality of treatment for these lesions and technical success has become more than 90% in most studies.
A. Atherosclerotic renal artery stenosis with
B. Fibrous dysplasia without

282 A 283 B 284 D 285 A 286 B 287 A 288 B

C. Atheroembolism of renal artery without
D. Iatrogenic renal artery compression by its aneurysm with
E. Inflammatory renal artery stenosis with *(CU9-1181)*

289. In cases of osteal real stenotic lesions, the endo-vascular stent should be placed to protrude ___ mm into the aortic lumen to prevent restenosis caused by recoil of the aortic plaque.
A. 1-2 **B.** 0.5 – 0.75
C. 3 – 3.5 **D.** 2.5 – 3.0 *(CU9 1185)*

290. ___ are the most common type and constitute about 75% of renal artery aneurysms.
A. Intrarenal arterial **B.** Dissecting
C. Fusiform **D.** Saccular *(CU9-1187)*

291. When which of the following criteria(s) is/are present, small (2 cm) asymptomatic noncalcified or incompletely calcified renal arterial aneurysms can be managed nonoperatively?
A. Aneurysm causing renal ischemia, and hyper-tension
B. Dissecting aneurysm
C. Aneurysms associated with flank pain, hematuria
D. A, B, and C
E. In child bearing age, who is likely to conceive
F. None of above *(CU9-1187)*

292. Acquired renal arterio-venous fistulas are the most common type. Approximately 70% fistulas occurring after needle biopsy of the kidney close spontaneously within ___ months.
A. 18 **B.** 12
C. 6 **D.** 3 *(CU9-1189)*

293. Contraindications to a percutaneous endopyelotomy are ___ cm of obstruction, active infection, and untreated coagulopathy.
A. > Two **B.** < Two
C. > 0.5 **D.** > One *(CU9-1233)*

294. Match the following various bridging methods of ureteral defect lengths with different reconstructive surgical techniques.
1. Ureteroureterostomy 2. Ureteroneocystostomy
a. 5 – 8 cm b. 2 – 3 cm
3. Psoas hitch 4. Boari flap
c. 4 – 5 cm d. 6 – 10 cm
5. Renal descensus e. 12 – 15 cm
A. 1 and a : 2 and b : 3 and c : 4 and d : 5 and e
B. 1 and b : 2 and c : 3 and d : 4 and e : 5 and a
C. 1 and e : 2 and d : 3 and c : 4 and b : 5 and a
D. 1 and d : 2 and a : 3 and b : 4 and c : 5 and e *(CU9-1259)*

289 A 290 D 291 F 292 A 293 A 294 B

295. Endourologic management of ureteroenteric or ureterocolic strictures, favours:
A. Antegrade management
B. Retrograde management
C. Any of A or B
D. Endourologic procedures are contraindicated *(CU9-1269)*

296. Good long term success rates have been reported with open repair of ureteroenteric strictures, as high as 80%. Strictures longer than ___ cm were more likely to recur and ___ side has less success rates.
A. Two, Left **B.** One, Left
C. One, Right **D.** One, Right *(CU9-1270)*

297. Laceration of more than one cm parenchymal depth of renal cortex without collecting system rupture or urinary extravasation comes under grade ___ according to American Association for the Surgery of Trauma Organ Injury Severity Scale for the kidney.
A. II **B.** III
C. IV **D.** V *(CU9-1275)*

298. Exceptions to the criteria for an ideal kidney donor are made in an effort to expand the donor pool, resulting in adaption of the "expanded criteria donor" : they are defined as:
A. Donors older than 60 years of age
B. Donors 51 – 59 years of age with any two of either cerebrovascular death or hypertension or serum creatinine > 1.5 mg/dL risk factors
C. Both A and B
D. Donors with only one of Syphilis, Hepatitis, HIV, Human T lymphoproliferative virus positive assays. *(CU9-1303)*

299. A renal transplant patient will not experience typical renal colic, and the diagnosis is suspected when renal function deteriorates or transplant pyelonephritis occurs, because:
A. Of immunosuppression
B. Of change in anatomical location
C. Renal transplant is denervated
D. All of A, B and C *(CU9-1320)*

300. During prolonged renal ischemia, ___ portion of the proximal tubule sustains the most severe injury.
A. S_1 **B.** S_2
C. S_3 **D.** S_4 *(CU9-1331)*

295 A 296 B 297 B 298 C 299 C 300 C

301. ___ is the most commonly injured artery in endourologic procedures.
A. Posterior segmental **B.** Apical
C. Anterior segmental **D.** Arcuate *(CU9-1529)*

302. Several authors have reported problem with wound complications and ___% hernia incidence, with all hernias presenting at least 3 months after hand assisted laparoscopic radical nephrectomy.
A. 10 **B.** 15
C. 4 **D.** 20 *(CU9-1798)*

303. A Strictly extracorporeal approach of radio surgery (radiation destroys dividing cells by mitosis-linked death) using a frameless image guided radio-surgical device for focal renal ablation is ___. It is temperature independent.
A. Cyber knife **B.** Computer knife
C. Artificial knife **D.** Ghost knife *(CU9-1818)*

304. The primary indication for surgical external urethral sphincterotomy was, and still is, detrusor sphincter dyssynergia in a male patient when other types of management have been unsuccessful or are not possible. The 12 O'clock sphincterotomy remains the procedure of choice:it was originally proposed by ___ .
A. Santiago (1993)
B. Madersbacher and Scott (1975)
C. Ross and colleagues (1958)
D. Wein et al (1976) *(CU9-2302)*

305. Not a true statement about ureteroeneteric fistula.
A. Most likely due to Crohn's disease
B. Terminal ileum is mostly involved
C. Most are unilateral and right sided
D. Diagnosis is mostly by IVU *(CU9-2353)*

306. Right sided Pyeloenteric fistulas most often involve ___:
A. Duodenum **B.** Ascending colon
C. Descending colon **D.** Hepatic flexure *(CU9-2353)*

307. Most common cause of rectourethral fistula is:
A. Radical Retropubic prostatectomy
B. TURP
C. OIU
D. TUIP *(CU9-2354)*

301 A 302 C 303 A 304 B 305 D 306 A 307 A

308. ____ procedure is a transrectal, trans-sphincteric approach that has been shown to be effective with low morbidity in repair of rectourethral fistula

A. Bukowski **B.** York-Mason
C. Henderson-Prasad **D.** Middleton *(CU9-2355)*

309. Transurethral Biopolar electro resection of bladder tumors:

A. Allow TUR in saline
B. Can minimize the risk of obturator reflex
C. Both A and B
D. None is true *(CU9-2451)*

310. The ____ laser has the best properties for use in bladder cancer.

A. KTP **B.** Carbon dioxide
C. Holmium: YAG **D.** Nd: YAG *(CU9-2453)*

311. Patients should stop taking aspirin ____ before surgery.

A. Two days **B.** Two weeks
C. Seven days **D.** 21 days *(CU9-2483)*

312. The polyethylene glycol-electrolyte lavage solution can be given to children younger than 1 year of age at a rate of ____.

A. 25 ml/Kg/hour **B.** 50 ml/Kg/hour
C. 70 ml/Kg/hour **D.** 1 L/3 hours *(CU9-2539)*

313. In general, intestine tissue less than ___ mm and more than ____ mm in thickness are not amenable to use of staples.

A. 1, 3 **B.** 0.8, 4
C. 3, 4 **D.** 1, 4 *(CU9-2544)*

314. At ____, scar tissue at the urethral disruption site is stable enough to allow urethroplasty to be undertaken safely.

A. One month **B.** Two months
C. Three months **D.** Four months *(CU9-2659)*

315. Cryoablation destroys prostate tissue through freezing. Current technology uses ____ gas circula-ting through hollow needles to freeze the prostate and ___ gas to warm the urethra.

A. Argon, Helium **B.** CO_2, Helium
C. Nitrogen, Helium **D.** Argon, CO_2 *(CU9-2944)*

316. The risk of rectal freezing during third-generation cryotherapy (includes TRUS guidance, pinpoint thermocouples and a brachytherapy-like template) can be lessened by injecting____ into Denonvilliers' fascia.

A. Normal saline **B.** Silicon gel
C. 10% Dextrose **D.** Artificial glue *(CU9-3034)*

308 B 309 C 310 D 311 B 312 A 313 A 314 C 315 A 316 A

317. In this procedure (for reflux correction) the trigonal mucosa is incised vertically and the two ureters are approximated into the midline with a single sub-mucosal suture.
A. Paquin **B.** Cohen cross-trigonal
C. Glenn-Anderson **D.** Gil-Vernet *(CU9-3466)*

318. Randolph, Ehrlich, Monfort are the different techniques of _____ in surgical management of Prune belly syndrome.
A. Orchipexy
B. Reduction cystoplasty
C. Abdominal wall reconstruction
D. Ureteral reconstruction *(CU9-3493)*

319. This method is truly a "completed repair" as it accomplish all the facts of exstrophy reconstruction in a single procedure.
A. Seattle **B.** Warsaw
C. Erlangen **D.** Cantwell-Ransley *(CU9-3517)*

320. The following drugs have been used to prevent postoperative penile erections after penile surgery.
A. Ketoconazole **B.** Amyl nitrite
C. Amticholinergics **D.** Both A and B *(CU9-3720)*

321. Circumcision should not be performed in neonates with: 1. Hypospadias 2. Chordee without hypos-padias 3. Dorsal hood deformity 4. Webbed penis 5. Small penis.
A. All **B.** All except 5
C. All except 4 and 5 **D.** Only 1 *(CU9-3747)*

322. If too much of penile skin has been removed during circumcision the following step may be taken:
A. Application of as antibiotic ointment and adherent gauze to be open wound usually yields a satisfactory result.
B. Immediate skin grafting is rarely necessary
C. Suturing the skin edges together to bridge the gap
D. A and B. C is not recommended
E. Only A and B *(CU9-3748)*

323. Current ureterscopic instruments permit safe access to the ureter in children as young as _____ months.
A. 2 **B.** 3
C. 4 **D.** 8 *(CU9-3907)*

317 D 318 C 319 C 320 D 321 A 322 D 323 C

324. Embolic materials such as ____ is/are not used to treat hemorrhage form pelvic trauma as they produce very peripheral occlusion of small vessels, thereby risking ischemia of nontarget organs.

A. Gelfoam sponge **B.** Gelfoam pledgets
C. Ivalon particles **D.** Gelfoam powder
E. Coils **F.** C and D *(SU16-113)*

325. Total renal ablation using transcatheter emboli-zation may be indicated in certain circumstances. Embolic agent of choice is _____.

A. Gelfoam sponge **B.** Absolute ethanol
C. Stainless steel coils **D.** 1% silver nitrate *(SU16-115)*

326. Percutaneous transcatheter embolization is used for:

A. Ovarian vein varices **B.** Primary varicocele
C. High flow priapism **D.** All of above *(SU16-116)*

327. In catheter directed fibrinolysis of native renal artery or aortorenal bypass graft thrombosis _____ is currently the most frequently used agent in United States.

A. Low molecular heparin
B. Tissue plasminogen activator
C. Streptokinase
D. Urokinase *(SU16-119)*

324 F 325 B 326 D 327 B

16 Female Urology

1. **Which of the following in a female is *not true*?**
   A. Normally, the bladder base is above the inferior ramus of the pubis symphysis and, with stress man-euvers, should descend at least more than 1 cm
   B. In the normal continent female, the bladder neck is closed at rest and with straining, as demonstrated in the true lateral cystogram at a urethrotrigonal angle of 90 degrees
   C. The angle of inclination of the female urethra to the vertical axis with the patient in the standing position is normally less than 35 degrees
   D. When the urethrotrigonal angle is greater than 90 degrees, it signifies funnelling of the bladder neck *(CU 2791)*

2. **According to present data, the success rate with periurethral teflon injection in the treatment of stress urinary incontinence in females is:**
   A. 42 per cent **B.** 52 per cent
   C. 62 per cent **D.** 72 per cent *(CU 2804)*

3. **The female patient with urethral diverticula may present with classic triad of:**
   A. Dribbling, dyspareunia, dysuria
   B. Dysuria, frequency, urgency
   C. Postmicturition dribbling, painful suburethral swelling, dyspareunia
   D. Haematuria, dysuria, frequency *(CU 2815, JIPMER)*

4. **The more common cause of vesicovaginal fistula in underdeveloped nations is:**
   A. Obstetric trauma
   B. Hysterectomy
   C. Cervical cancer
   D. Diverticular disease of the colon *(CU 2821)*

1 A 2 C 3 A 4 A

5. **In difficult transvaginal repair, or if for any reason the closure of the fistula is tenuous, one can interpose between bladder and vagina the Martius flap. This is:**
   A. A segment of fascia lata
   B. A vascularised segment of omentum
   C. A segment of vascularised labial fibrofatty tissue
   D. A vascularised myocutaneous flap of labia majora
   (CU 2823)

6. **One of the advantages to endoscopic suspension of vesical neck for the treatment of stress urinary incontinence is that:**
   A. Green type I bladder configuration gets better result with it
   B. Green type II bladder configuration can also be treated
   C. It makes no difference whether Green's type I or type II bladder configuration is present
   D. The incision is deep so that the suspension is sufficiently closer to the vesical neck *(CU 2838)*

7. **Endoscopic suspension of the vesical neck was first described in 1973 by:**
   A. Burch **B.** Marshall
   C. Marchetti **D.** Stamey *(CU 2842)*

8. **The Stamey procedure is usually performed using a spinal block with a sensory level of anaesthesia to at least:**
   A. T_{12} **B.** T_{10}
   C. T_8 **D.** L_1 *(CU 2842)*

9. **Which of the following should not be a complication of endoscopic suspension of vesical neck?**
   A. Osteitis pubis
   B. Suprapubic wound infection
   C. Exposed dacron tube
   D. Suture and bolster erosion into the bladder *(CU 2848)*

10. **'National Institute of Health Criteria' required for inclusion of the diagnosis of interstitial cystitis includes all of the following *except:***
    A. Urge incontinence **B.** Bladder pain
    C. Urinary urgency **D.** Glomerulations on cystoscopy
    E. A classic Hunner's ulcer *(AUA 93-8)*

11. **Which of the following best characterises interstitial cystitis?**

5 C 6 C 7 D 8 B 9 A 10 A 11 B

A. It is caused by sympathetic dystrophy of the bladder nerves
B. Aetiology may be multifactorial and still undetermined
C. It is caused by viral infection
D. It is caused by vesical myopathy
E. It is caused by bacterial infection *(AUA 93-8)*

12. The 'GAG theory' of pathogenesis of interstitial cystitis includes all of the following *except:*
A. Glycosaminoglycans form the lining of the bladder epithelium
B. Breakdown of GAG layer may be the initial event in the pathogenesis of interstitial cystitis
C. Loss of GAG leads to the leak of urine into the bladder wall interstices
D. Urine in the intertrices of the bladder wall leads to the pathologic changes seen in interstitial cystitis
E. GAG antibodies cause urothelial disruption *(AUA 93-8)*

13. Vaginal vault prolapse is:
A. An eversion of the rectovaginal septum into the posterior vaginal wall
B. A very common complication of hysterectomy
C. Sometimes associated with hydronephrosis
D. Rarely associated with an enterocele
E. Difficult to diagnose in standing position *(AUA 93-25)*

14. A voiding cystogram is helpful in grading a cystocele when performed:
A. Supine with AP views
B. Standing with AP views
C. Standing with oblique views
D. Supine with lateral views
E. Supine with oblique views *(AUA 93-25)*

15. A 50-year-old sexually active female is being evaluated for a transvaginal bladder neck suspension procedure. A significant posterior vaginal wall protrusion is noted on rectal examination. Assuming that she has asymptomatic rectocele, one of the following points is *not true*:
A. Her constipation problem is unlikely to subside post-operatively
B. She should be consented for an enterocele repair
C. Postoperative dyspareunia would not be related to the repair
D. Concomitant perineal repair may be needed
E. Rectocele occurs as a result of weakened rectovaginal septum *(AUA 93-25)*

12 E 13 C 14 B 15 B

16. The uterosacral ligaments are:
- **A.** Located between the cervix and the levator muscle complex
- **B.** Easy to identify after completion of an abdominal hysterectomy
- **C.** Utilised in the repair of a grade II rectocele
- **D.** Necessary to achieve adequate vaginal vault support after hysterectomy
- **E.** Found on the medial edge of the pubococcygeus muscle

(AUA 93-25)

17. A 65-year-old female complains of a 'bulge' coming out of her vagina. On examination she has a grade IV cystourethrocele and a normal posterior vaginal wall. She underwent a vaginal hysterectomy 15 years ago and is currently taking estrogens. She denies any urinary symptoms. Her urinalysis is negative and her postvoid residuals are low. After repair of her cystocele by an anterior colporrhaphy, she is likely to return to your office complaining of the new onset of:
- **A.** Dyspareunia
- **B.** Stress incontinence
- **C.** Urinary retention
- **D.** *De novo* detrusor instability
- **E.** Constipation

(AUA 93-25)

18. In the grading of cystocele from I to IV, a grade III cystocele represents a descent of the bladder base:
- **A.** At the introitus with straining
- **B.** Below the ischial tuberosity
- **C.** Beyond the introitus at rest
- **D.** At the introitus at rest
- **E.** Frequently mimicking a urethral diverticulum *(AUA 93-25)*

19. By definition, descent of the bladder base—is cystocele:
- **A.** Below the superior margin of the symphysis pubis
- **B.** Below the mispoint of symphysis pubis
- **C.** Below the inferior margin of the symphysis pubis

(AUA 93-25)

20. Most reports agree that renal artery aneurysms of more than 1.5 cm, calcified or not, should be surgically repaired. Regarding the repair of renal artery aneurysm in a woman of childbearing age, most authors:
- **A.** Recommend it
- **B.** Do not recommend it
- **C.** Remain silent about it
- **D.** Leave it on the part of the concerned surgeon's decision

(CU 7 453)

16 D 17 B 18 D 19 C 20 A

21. Postmenopausal women have frequent reinfections of the urinary tract. A reduced incidence of this has been documented with:
A. Prophylactic low dose ciprofloxacin
B. Three months TMP-SMX therapy
C. Life-long once a day nitrofurantoin 100 mg
D. Estrogen replacement *(CU 7 591)*

22. Urinary protein in pregnancy is not considered abnormal until greater than _____ mg of protein in 24 hours urinary excretion:
A. 100 mg **B.** 200 mg
C. 300 mg **D.** 400 mg *(CU 7 597)*

23. Constellation of symptoms and findings of severe pain on vestibular touch to attempted vaginal entry, tenderness to pressure localised within the vulvar vestibule, and physical findings confined to vulvar erythema of various degree is:
A. Vulvar vestibulitis syndrome
B. Urethral syndrome
C. Interstitial cystitis
D. Vaginismus *(CU 7 634)*

24. Which of the following cephalosporins should be avoided in pregnancy?
A. Moxalactum **B.** Cefoperazone
C. Cefotetan **D.** None of the above
E. All of A, B and C *(CU 7 670)*

25. Enetroceles are minimally symptomatic until descent reaches the grade ____ hymenal level:
A. 1 **B.** 2
C. 3 **D.** 4 *(CU 7 1082)*

26. Not a differential diagnosis of interlabial mass:
A. Rhabdomyosarcoma **B.** Urethral prolapse
C. Prolapsing ureterocele **D.** Prolapsing megaureter
E. Bladder prolapse *(CU 7:1839, 2134-35)*

27. Causes of clitoromegaly include all *except:*
A. Clitoral duplication
B. Chronic severe vulvovaginitis
C. Neurofibromatosis
D. Hemangiopericytoma *(CU 7 2133)*

28. Which of the following is/are *true*?
A. Characteristically, the uterus in vaginal agenesis patients is rudimentary, without a lumen, although normal fallopian tubes are present, and ovarian function is normal

21 D 22 C 23 A 24 E 25 B 26 D 27 A 28 E

B. Transverse vaginal septum is a vertical fusion disorder
C. An obstructed hemivagina and bicornuate uterus are almost always associated with ipsilateral renal agenesis
D. The cremasteric reflex is most active during infancy
E. A, B, C
F. All of A B C and D
G. Only A and B *(CU 7 2139-2174)*

29. Elevated serum concentration of ____ and DHEA are the hallmark of the presence of adrenal tumours in women who present with hirsutism:
A. Testosterone
B. ACTH
C. Corticotropin-releasing hormone (CRH)
D. Pro-opiomelanocortin (POMC) *(CU 7 2923)*

30. Striated urethral sphincter invests the ___ of female urethra.
A. Distal 2/3rd **B.** Distal ¼th
C. Distal ½ **D.** whole urethra *(CU9-67)*

31. Renal length increases approximately___cms during normal pregnancy.
A. 1 **B.** 2
C. 3 **D.** 4 *(CU9-290)*

32. Transient increase in GFR during pregnancy is probably due to increase in___.
A. Cardiac output **B.** Serum progesterone
C. Kidney size **D.** Serum estrogen *(CU9-290)*

33. Bladder hypertrophy and squamous change of the urethra during normal pregnancy are caused by___.
A. Estrogen stimulation
B. Progesterone stimulation
C. Testosterone inhibition
D. Oxytocin stimulation *(CU9-290)*

34. Circulating levels of androgens, recognized sex steroids, that are major modulators of sexual function in women, are ___ by oral contraceptives.
A. Decreased **B.** Increased
C. Remain unchanged *(CU9-876)*

35. Diffuse, constant, burning pain any where on the vulva, from mons to anus which is hypertrophic and greatly out of proportion to stimulus is referred to as ___.

29 A	**30 A**	**31 A**	**32 A**	**33 A**	**34 A**	**35 B**

A. Chronic pelvic pain syndrome
B. Generalised vlvodynia
C. Vulvar vestibulitis syndrome
D. Atrophic vaginits *(CU9-885)*

36. Afflicted patients of ___ complain of severe pain during sexual activity often described as raw, red burning, feeling like sandpaper or burnt tissue being rubbed.
A. Chronin pelvic pain syndrome
B. Generalised vulvodynia
C. Vulvar vestibulitis syndrome
D. Atrophic vaginits *(CU9-885)*

37. The diagnosis of lichen slerosus of vulva is suspected if no physical examination a characteristic ___ wrinkling of vestibular tissue is seen: classically there is 'figure of eight' extension if gluteal tissue changes involves the perianal area.
A. Rasp berry **B.** Cigarette paper
C. Tissue paper **D.** Wavy *(CU9-884)*

38. About one third of patients may have persistent hydronephrosis during the first post partum week, but resolves in the majority within ___ weeks.
A. Three **B.** Six
C. Nine **D.** Twelve *(CU9-1219)*

39. In hydroureteronephrosis of pregnancy when urete-ral dilatation extends below ___ on USG, a different etiology of obstruction such as ureteral stone should be considered.
A. Pelvic brim **B.** Mid-ureter
C. L1 vertebra **D.** L2 vertebra *(CU9-1219)*

40. A venous cause of ureteral obstruction: 1. Puerperal ovarian vein thrombobhlebitis 2. Testicular vein thrombobhlebitis 3. Circumcaval ureter
A. Only 3 **B.** 1, 2, 3
C. Only 1, and 2 **D.** Only 1 and 3

41. Renal diseases that do not recur in transplanted kidney: 1. Autosomal dominant polycystic kidney disease 2. Autosomal recessive polycystic kidney disease 3. Alport's syndrome without antiglomerular basement membrane antibodies 4. Renal dysplasia
A. All true **B.** All except 2
C. All except 1 **D.** All except 4

36 C 37 B 38 B 39 A 40 B 41 B

42. The normal ranges of serum creatinine and BUN are approximately ___ for the pregnant patient.
A. 25% lower **B.** 35% lower
C. 50% lower **D.** 15% lower

43. Renal resistive index (measured by duplex sono-graphy) remains unchanged from non pregnant state throughout the course of pregnancy and also is unaffected by the physiologic hydronephrosis of pregnancy.
A. The statement is true
B. The statement is false
C. This modality may be useful in detecting acute obstruction in pregnant women
D. A and C *(CU9-1457)*

44. In most continent women, the functional urethral length is approximately 3 cm and maximum urethral closure pressure is ___ cm of water.
A. 40 to 60 **B.** 50 to 70
C. 30 to 35 **D.** 70 to 80 *(CU9-2067)*

45. The following urethral bulking agents to treat SUI in women is consistently superior to the others.
1. Bovine gluteraldehyde cross-linked collagen
2. Hyaluronic acid/Dextranomer
3. Carbon-coated zirconium beads
4. Polytetrafluoroethylen
5. Autologus tissue such as fat and cartilage
6. Polydimethylsiloxane elastomer
7. Dimethyl sulfoxide in etylene vinyl alcohol
A. 1 and 3 **B.** Only 1
C. Only 7 **D.** 4 and 5
E. None to another *(CU9-2075)*

46. According to the AUA Urinary Incontinence Clinical Guidelines panel, the most efficacious for long-term success in SUI in females is ___.
A. Colposuspension and slings
B. Pelvic floor muscle training and electrical stimulation
C. Pharmacologic treatment
D. Urethral bulking agents *(CU9-2076)*

47. This drug may produce stress incontinence in women.
A. Terbutaline **B.** Clenbuterol
C. Isoprenaline **D.** Tamsulosin
(CU9-2103)

42 A 43 D 44 A 45 E 46 A 47 D

48. Not a true statement for women with SUI (ICI committee-2005).
A. PFMT and vaginal cones have similar effect.
B. Electrical stimulation is superior to PFMT
C. PFMT is less effective than surgery
D. Muscle bulk is not a prerequisite for improved continence with PFMT *(CU9-2132)*

49. Uterine prolapse is a part of the ___ compartment (anatomic classification of pelvic floor prolapse) and can vary from minimal to procidentia.
A. Anterior **B.** Middle
C. Posterior **D.** Perineal body defect *(CU9-2200)*

50. A synthetic polypropylene monofilament mesh with pore size under 150 µmm, optimal for inciting fibrous tissue ingrowth, used as tension free vaginal tape procedure is type___ mesh.
A. I **B.** 2
C. 3 **D.** 4 *(CU9-2251)*

51. In postoperative voiding dysfunction, complica-tions, or oveall continence when compared TOT with TVT procedures:
A. TOT is superior to TVT
B. TVT is superior to TOT
C. No difference *(CU9-2269)*

52. GAX-collagen used as injection therapy for urinary incontinence is biocompatible biodegradable and elicits a minimal inflammatory reaction without foreign body reaction. It begins to degrade in ___ weeks and is completely degraded in 19 months.
A. 6 **B.** 12
C. 18 **D.** 24 *(CU9-2274)*

53. Regardless of the technique of intraurethral injection chosen for treating voiding dysfunction, the goal is closure of bladder outlet such that there is apposition, as evidenced endoscopically, with the exception of ___ injection.
A. GAX-collagen **B.** Silicon polymers
C. Durasphere ESP **D.** Etylene vinyl alcohol *(CU9-2280)*

54. The most widely used injectable agent for urinary incontinence.
A. Autologus fat **B.** Silicone polymers
C. GAX-collagen **D.** Durashere *(CU9-2282)*

55. Urethral over dilatation to ___ Fr in females can achieve the same objective as external urethral sphincterotomy in males, but is rarely performed (Wein and Barrett, 1988).

48 B	49 B	50 A	51 C	52 B	53 D	54 C	55 B

A. 30 – 40 **B.** 40 – 50
C. 50 – 60 **D.** 60 – 70 *(CU9-2303)*

56. Clear vaginal discharge after hysterectomy does not invariably represent a VVF or incontinence. Less common causes include:
1. Peritoneovaginal fistula
2. Lymphatic fistula
3. Vaginitis
4. Fallopian tube fluid
5. Normal vaginal secretions
A. All except 4 **B.** All except 5
C. All **D.** All except 1 and 2 *(CU9-2327)*

57. The operative approach to hysterectomy is an important factor for development of a postoperative VVF as bladder injuries are at least ___ times more common during abdominal hysterectomy compared to vaginal ones.
A. Three **B.** Four
C. Two **D.** Five *(CU9-2326)*

58. The VVF tracks that remain open ___ weeks or more after adequate Foley drainage and anticholinergic medication are unlikely to resolve spontaneously/without further intervention.
A. Three **B.** Four
C. Six **D.** Eight *(CU9-2330)*

59. The conservative measures (injection of fibrin sealant into the fistula tract after fulguration with or without bovine collagen as an additional "plug") are useful for small, oblique fistulas, usually less than ___ mm in diameter.
A. 3 – 4 **B.** 2 – 3
C. 4 – 5 **D.** 3.5 – 4.0 *(CU9-2330)*

60. It is generally accepted that VVF resulting from obstructed labor (unlike those uncomplicated postgynecologic) should be associated with a ___ delay before definite repair.
A. 1 – 2 months **B.** 2 – 3 months
C. 3 – 6 months **D.** 6 – 8 weeks *(CU9-2330)*

61. The omentum is particularly useful structure in the repair of VVF due to its favorable following properties:
1. Ability to be mobilized on a well-vascularised pedicle in to the deep pelvis without tension.
2. Its inherent lymphatic properties
3. Its ability to contribute to healing even in the presence of infection

56 C 57 A 58 A 59 B 60 C 61 D

4. The ease with which ephithelialization occurs on its surface
A. All except 2 **B.** All except 3
C. All except 2 and 3 **D.** All *(CU9-2339)*

62. The most common cause of vesicouterine fistula.
A. Cesarean section
B. Lap myomectomy
C. Carcinoma endometrium
D. Uterine leiomyosarcoma *(CU9-2345)*

63. ___ 's syndrome describes the vesicouterine fistula : presenting symptom complex of menuria, cyclinc hematuria, with associated apparent amenorrhoea, infertility, and urinary continence in patient who has undergone prior low segment cesarean section.
A. Youssef **B.** Ehlers-Danlos
C. Isaac **D.** Gouverneur *(CU9-2345)*

64. The most common pathologic process in female urethral diverticula is ___.
A. Adenocarcinoma
B. Transitional cell carcinoma
C. Squamous cell carcinoma
D. Rhabdomyosarcoma *(CU9-2389)*

65. Usually seen in girls and is characterized by invo-luntary and typically unpredictable wetting during giggling or laughter.
A. Staccato voiding
B. Dysfunctional elimination syndrome
C. Giggle incontinence
D. Urofacial syndrome *(CU9-3612)*

66. _____ vaginoplasty involves creation of a neovaginal pouch from the labia majora.
A. Williams **B.** McIndoe
C. Frank **D.** Vecchietti *(CU9-3836)*

67. Excision of the clitoris and a portion of the labia minora comes under _____ type female genital mutilation procedure according to Toubia classification (1994).
A. I **B.** II
C. III **D.** IV *(CU9-3840)*

68. In clitoroplasty, _____ was first to report excising corporal tissue yet preserving the neurovascular bundle with glans intact. Virtually all techniques since have been based on this.

62 A 63 A 64 A 65 C 66 A 67 B 68 B

A. Randolph **B.** Schmid
C. Kogan **D.** Hung
E. Crawford *(CU9-3854)*

69. The following one test are 100% specific for bladder transitional cell carcinoma.
A. Gram's stain **B.** Lugol's solution
C. Giemsa stain **D.** Methylene blue *(SU16-57t)*

70. The following antibiotic is not safe for developing fetus during pregnancy.
A. Fosomycin trometamol
B. Aminoglycosides
C. Monobactamus
D. Cephalosporins *(SU16-222t)*

69 B 70 B

17 Molecular Biology, Immunology and Genetics

1. **Natural killer cells are large granular _____ that can destroy various nucleated cells ,including tumor and virus-infected cells.**
   A. Monocytes **B.** Lymphocytes
   C. Eosinophils **D.** Neutrophils *(CU9-477)*

2. **Major histocompatibility complex describes a region of genes located on chromosome ___ in human.**
   A. 6 **B.** 9
   C. 13 **D.** 16
   E. 3 *(CU9-479)*

3. **HLA class II antigens are primarily found in B-cells, monocytes, macrophages, and antigen presenting cells. ___ cells express HLA class I antigens.**
   A. Virtually all nucleated cells
   B. T-lymphocytes
   C. B-lymphocytes
   D. Both B and C

4. **The most affective immunological activation of the T-cell receptor requires the interaction with CD-receptor molecules ___ that serves to bring Lck kinase in close proximity to the cytoplasmic domain of the TCR complex.**
   A. CD4 and CD8 **B.** CD3 and CD8
   C. CD40 and CD45 **D.** All of above

5. **Immunosuppressive drugs cyclosporine and tacro-limus function by blocking _____ pathway.**
   A. Ras
   B. NFAT (nuclear factor of activated T-cells)
   C. IP3 (Inositol triphosphate)
   B. DAG (Diacylglycerol) *(CU9-483)*

6. **Fas and TNFRI belong to the TNF receptor gene super family and contain a cytoplasmic sequence termed as ____ .**
   A. Death domain **B.** Suicide domain
   C. Homicide domain **D.** Death traffic *(CU9-483)*

1 B 2 A 3 A 4 A 5 B 6 A

7. The normal immune system is not a significant barrier to tumor growth and metastasis. Manipulation of immune system can lead to tumor rejection.
A. True **B.** False *(CU9-495)*

8. Most forms of immunotherapy are centered on the activation of the ___ responses in the tumor bearing host.
A. B- cells **B.** T- cells
C. NK- cells **D.** Macrophages *(CU9-495)*

9. Not a tissue specific (melanocytic lineage) human tumor antigen recognized by T-cells.
A. MART-1 **B.** Tyrosinase
C. pg 100 **D.** TRP-1 (gp 75)
E. MAGE-1 *(CU9-496)*

10. All gangliosides can inhibit immune response to tumors. There is over expression of ___ in melano-mas and neuroblastomas.
A. GD1a, GM1 **B.** GD3,GD2
C. GMib **D.** All of above *(CU9-498)*

11. The cellular source of representative cytokine interleukin – 15 is:
A. Fibroblasts, endothelial cells, dendritic cells
B. Type 2 CD+4 T-cells
C. T-cells, NK-cells, macrophages
D. T-cells, B-cells

12. A cancer vaccine approach :
A. Allogenic dendritic cells fused to autologous tumor cells as vaccine
B. Injection of irradiated tumors
C. Synthetic peptides corresponding to defined tumor associated antigens (TAAs) pg.MART-1.
D. Electro fuse dendritic cells with tumors to generate dendritic-tumor hybrids
E. All of above *(CU9-486)*

13. Emerging technologies in molecular immunology have set the stage for the___of biology in which cellular events are described in terms of the transcriptome (mRNA transcripts), proteome (proteins), metabolome (metabolic products), and glycomics (carbohydrate modification to proteins), etc.
A. DNA chips **B.** Omics
C. Genetic probe **D.** Spotting *(CU9-502)*

14. Machine synthesized oligonucleotides of between 25- to 75- mer length have been used as genetic probes. When thousands of these probes are spotted these are described as a DNA micro assay or a _____.

7 A 8 B 9 D 10 B 11 A 12 E 13 B 14 A

A. DNA gene chip **B.** DNA sim
C. DNA visa **D.** DNA smart *(CU9-503)*

15. DNA is the fusion of three different elements : a base (pyrimidine or purine), A ____ (in the case of DNA called 2-dioxyribose, for RNA called ribose), and a phosphate (which links individual nucleotides together).
A. Protein **B.** Lipid
C. Sugar **D.** Lutein *(CU9-507)*

16. When DNA is replicated, each strand of the double helix provides a template to order the base of the new strand. The physical chemistry of the bases requires that a purine form a specific ___ bond with pyrimidine : the purine adenine (A. always binds to the pyrimidine thymine (T),and the purine guanine (G) always binds to the pyrimidine cytosine (C).
A. Oxygen **B.** Hydrogen
C. Carbon **D.** Nitrogen *(CU9-507)*

17. The pairing of two single strands of complimentary DNA sequence to form a double helix is known as ___ in molecular biology.
A. Exon **B.** Intron
C. Transfection **D.** Annealing *(CU9-508)*

18. Match the following:

A. Three sequential nucleotides that specify a particular amino acid or a stop signal	1. Southern blotting
B. Nongenetic information that modifies	2. Northern blotting
C. All the chromosomes within a cell gene expression	3. Karyotype
D. A technique of transferring RNA from an agarose gel to a nitrocellulose filter for hybridization with complimentary DNA	4. Epigenetics
E. A technique of transferring denatured DNA from an agarose gel to nitrocellulose filter for hybridization with complimentary DNA	5. Codon

(CU9-508)

A. a1, b2, c3, d4, e5
B. a2, b3, c1, d5, e4
C. a5, b3, c4, d1, e2
D. a5, b4, c3, d2, e1

15 C 16 B 17 D 18 D

19. Most commonly mutated gene in human tumors, including genitourinary malignancies:
A. *p* 53 **B.** VHL
C. MET **D.** FLNC ***(CU9-522)***

20. DNA repair is not one system but at least ___, including nucleotide excision repair (NER), base excision repair (BER), mismatch repair (MMR), and double stranded break repair (DSBR).
A. Four **B.** Five
C. Six **D.** Seven *(CU9-527)*

21. Elevated levels of classic inhibitor of mitochondrial pathway of apoptosis have been identified in the majority of hormone refractory prostate tumors.
A. BCL 1 **B.** BCL 3
C. BCL 4 **D.** BCL 2 *(CU9-532)*

22. Brit-Hogg-Dube syndrome is associated with chrom-osome 17p11-2 , gene FLNC and ____.
A. Papillary renal carcinoma
B. Oncocytoma
C. Both A and B
D. Wilm's tumor
E. Clear cell renal carcinoma *(CU9-515,533)*

23. _____ is normally only expressed in cells that need to divide an unlimited number of times , such as gametes or stem cells.
A. Telomerase **B.** DNA polymerase
C. RNA trimerase **D.** p31 kinase *(CU9-533)*

24. Common properties of stem cells include:
1. Immortality
2. Ability both to self-renew and spawn progeny
3. Their localization within specified niches
4. Ability to give rise to all types within the organ

A. All true **B.** Only 1,2,3
C. Only 2,3,4 **D.** 2,4 only *(CU9-534)*

25. Loss of heterozygosity of chromosome ___ is the earliest and most common genetic abnormality in prostate cancer.
A. 10p **B.** 10q
C. 8p **D.** 8q *(CU9-536)*

26. Epidermal growth factor induces cell proliferation across a broad set of cell types including those derived from :

19 A 20 A 21 D 22 C 23 A 24 A 25 C 26 D

1. Ectoderm
2. Mesoderm
3. Endoderm

A. Only 3 **B.** Only 1
C. 2 and 3 **D.** All 1 ,2 and 3 *(CU9-536)*

27. Insulin like growth factors (IGFs) are secreted by:
A. Beta cells of pancreas
B. Prostatic stromal cells
C. Vascular endothelium
D. Parietal cells of stomach *(CU9-537)*

28. The concentration of immunoreactive endothelin-1 (the most potent endogenous vasoconstrictor known) are highest in:
A. Prostatic secretions **B.** Seminal fluid
C. Renal cortex **D.** Adrenal medulla *(CU9-537)*

29. Bridging the gap between extra cellular matrix and the cytoskeleton are the ___ which act not only as structural elements but also as a type of receptor.
A. Integrins **B.** E-Cadherin
C. Caveolin **D.** Anoikins. *(CU9-539)*

30. Loss of interaction between normal epithelial cells and the extracellular matrix leads to apoptosis, a process known as ___.
A. Anoikis **B.** Natural cell death
C. Furnaro **D.** Mesenchymal transition *(CU9-539)*

31. Caveolins (abundant in endothelium, smooth muscles, and fibroblasts) are ___ that are the major constituents of plasma membrane structure called caveolae.
A. Sugars **B.** Proteins
C. Phospholipids **D.** RNAs *(CU9-540)*

32. ___ virus induced human malignancies play a major role with hepatitis B and papilloma viruses (responsible for 80%).
A. DNA **B.** RNA
C. mRNA **D.** Both A and C *(CU9-541)*

33. Given the physical limitation of oxygen diffusion in solid tissue, which is limited to 200:M, the growth of a tumor over ___ requires supporting vasculature.
A. Five mm **B.** One cm
C. Two cm **D.** Two mm *(CU9- 542)*

34. Not an angiogenesis activator :

27 B	**28 B**	**29 A**	**30 A**	**31 B**	**32 A**	**33 D**	**34 D**

A. Vascular permeability factor (VPF)
B. VEGF
C. Fibroblast growth factor-2 (FGF-2)
D. None of the above (CU9-542)

35. Not an inhibitor of angiogenesis :
A. Bleomycin **B.** Vincristine
C. Thalidomide **D.** Avastin
E. Sorafenib **F.** Thromboplasmin *(CU9-542)*

36. A 12p isochromosome was first identified in ____ tumors in the 1980s, and this cytogenic hallmark has diagnostic and prognostic value.
A. RCC
B. TCC bladder
C. Penile squamous cell carcinoma
D. Testicular *(CU9-548)*

37. cDNA micro assay refers to the ability to screen for expression of thousands of genes simultaneously on ____.
A. Silicon chip **B.** Agar-agar plate
C. Titanium sim **D.** Neodymium Yttrium Garnet chip *(CU9-550)*

38. Sprouting of capillaries from pre-existing blood vessels is:
A. Vasculogenesis **B.** Angiogenesis
C. Both A and B *(CU9-556)*

39. *In situ* assembly of capillaries from undifferentiated endothelial cells is:
A. Vasculogenesis **B.** Angiogenesis
C. Both A and B *(CU9-556)*

40. A limiting factor for the engineering of tissue is that cell cannot be implanted in volume exceeding ___ mm^3 due to nutrient and gas exchange limitation by its maximal diffusion distance.
A. 1 **B.** 2
C. 3 **D.** 4 *(CU9-556)*

41. Polyesters (PGA, PLA, PLGA, used in tissue engineering) used as sutures in human are eventually eliminated form the body in the form of ___.
A. H_2O, Nitrogen **B.** H_2O, Oxygen
C. H_2O, CO_2 **D.** H_2O, Hydrogen *(CU9-556)*

42. In normal wound healing response the maximal distance the adjacent cells from the wound edge have to travel to form normal tissue over a biologic matrix is approximately ____.

35 D 36 D 37 A 38 B 39 A 40 C 41 C 42 A

A. One cm **B.** Two cms
C. Three cms **D.** Four cms *(CU9-558)*

43. The first human application of cell-based tissue engineering technology for urologic application occurred with the injection of ____ for correction of vesicoureteral reflux in children.
A. Myoblasts
B. Sphincter derived muscle cells
C. Chondrocytes
D. Muscle precursor cells *(CU9-568)*

44. Banned in most countries for human application:
A. Reproductive cloning **B.** Therapeutic cloning
C. Both A and B **D.** None of A,B,C *(CU9-571)*

45. First identifiable step separating the ovarian and testicular pathways of differentiation is the movement of primordial germ cells into the medullary cords, at about ___ weeks after conception.
A. Five **B.** Six
C. Seven **D.** Ten *(CU9-579)*

46. The commonest polymer used in stents now-a-days:
A. Silicon **B.** Polyethylene
C. Polyurethane **D.** Ethylene vinyl acetate *(CU9-1514)*

47. Positive immunoreactivity for HMB–45, a monoclonal antibody raised against a melanoma associated antigen , is characteristic for ____ and can be used to differentiate them from renal sarcomas.
A. AMLs **B.** RCCs
C. Reninomas **D.** Renal APUDomas *(CU9-1579)*

48. The gene located at chromosome ____ has now been confirmed to have a role as a tumor suppressor gene for both the sporadic and familial form of clear cell RCC.
A. $3p^{25-26}$ **B.** $6p^{25-26}$
C. $9p^{25-26}$ **D.** $53p^{25-26}$ *(CU9-1585)*

49. The cytogenetic abnormality associated with chromophilic RCC are characteristic and include trisomy of chromosomes ___ and loss of the Y chromosome.
A. 6 and 9 **B.** 3 and 12
C. 7 and 17 **D.** 5 and 15 *(CU9-1594)*

50. The micro vesicles of ___ characteristically stain positive for Hode's colloidal iron, indicating the presence of mucopoly-saccharide unique to RCC.

43 C 44 A 45 C 46 C 47 A 48 A 49 C 50 A

A. Chromophobe cell carcinoma
B. Medullary cell carcinoma
C. Clear cell carcinoma
D. Granular cell carcinoma *(CU9-1995)*

51. There are at least five receptor subtypes in normal human bladder based on molecular cloning, and four based on pharmacology. Ligand receptor binding study reveals that ___ receptor predominates.
A. M_1 **B.** M_2
C. M_3 **D.** M_4
E. M_5 *(CU9-1949)*

52. The receptor selectivity of solifenacin to M_3 receptors over M_2 receptors, ____ fold , is similar to that of oxybutynin.
A. 10 **B.** 20
C. 30 **D.** 40 *(CU9-1051)*

53. ___ is the most potent tachykinin (bladder afferent neuropeptide) for the NK_1 receptor.
A. Neurokinin B **B.** Neurokinin A
C. Substance P *(CU9-1955)*

54. Because of differing genetic imprints, it has been suggested that papillary ___ tumors of urinary bladder could almost be considered benign and might be a completely separate disease entity than high-grade tumors.
A. pTa **B.** pTb
C. pTc **D.** pTd *(CU9- 2449)*

55. The following investigational immunotherapeutic agent is an extract of garlic.
A. Bropirimine **B.** Mistletoe
C. Thiosulfinate **D.** Keyhole-limpet hemocyanin
(CU9-2458)

56. ____ is the only bladder tumor marker whose specificity approaches that of cytology: it also is not affected by hematuria and inflammation.
A. UroVysion
B. ImmunoCyt
C. NMP22 bladder check test
D. Accu-SX *(CU9-2465)*

57. One of the main biologic function of prostate-specific protein-94 is:

51 B 52 A 53 C 54 A 55 C 56 A 57 A

A. Inhibition of follicle-stimulating hormone
B. Stimulation of PSA release
C. Regulation of prostate-specific membrane antigen
D. Release of oxytocin *(CU9-2724)*

58. Uroplakin and thrombomodulin are:
A. Newer markers that help differentiate transitional cell carcinoma from adenocarcinoma of prostate.
B. Specific markers for seminal vesicle cancers
C. Help liquefy the semen
D. Newer chemotherapeutic agents under trial for adeno-carcinoma prostate *(CU9-2881)*

59. Of the complexed PSA derivatives found in serum , PSA bound to ___ is immunoreactive and found in the greatest concentration.
A. Alpha 1-antichymotripsin(ACT)
B. Alpha 2-macroglobulin(A2M)
C. Alpha 1-protease inhibitor(API)
D. fPSA (CU9-2901)

60. Expression of ___ protein has been localized to prostatic tissue and has been found in 95% of prostate cancer and prostate metastasis specimens.
A. GSTP1 **B.** SRD5A2
C. $DD3^{PCA3}$ **D.** RASSF1A *(CU9-2909)*

61. ____ has been developed as a highly selective endothelin A receptor antagonist and has been tested in prostate cancer.
A. Bortezomib **B.** Provenge
C. Rapamycin **D.** Atrasentan *(CU9-3116)*

62. Find out the wrong statement:
A. Relatively few genes have been shown to exhibit a female-specific pattern of gene expression early in gonadal development. Thus far, no female determining gene has been identified.
B. Urine production in the human kidney is known to begin around 10 to 12 weeks of gestation.
C. Hourly human fetal urine production increases from 5 mL at 20 weeks' gestation to 50 mL at 40 weeks' gestation.
D. Infants with GFR around 15 mL/min/1.73 m^2 are at unusually lower risk for early renal failure *(CU9-3147-3153)*

58 A 59 A 60 C 61 D 62 D

63. Macroplastique is used for endoscopic correction of reflux. It is ___.

A. Polydimethylsiloxane
B. Polytetrafluoroethylene
C. Dextranomer hyaluronic copolymer
D. Cross-linked bovine collagen. *(CU9-3464)*

64. The following statement in a patient with exstrophy is not true.

A. Sexual function and libido are usually normal.
B. In Woodhouse's experience most patients required vaginoplasty before intercourse could take place.
C. Review of literature reveals 45 women who successfully delivered 49 normal offspring.
D. Male patients with genital reconstruction seldom have ejaculatory difficulty and fathers children well.

(CU9-3551-52)

65. The following statement about cryptorchidism is not true .

A. Birth weight alone is the principal determinant of cryptorchidism at birth and at 1 year of life , independent of the length of gestation.
B. Cryptorchidism may be acquired in a significantly greater number of cases, in large part because of retractile testes (Barthold and Gonzalez, 2003) .
C. Approximately 70% to 77% of cryptorchid testes will spontaneously descend, usually by 3 months of age.
D. By 1 year of age , the incidence of cryptorchidism declines to about 2% and remains constant throughout adulthood.
E. Definitive treatment of an undescended testis should take place between 6 and 12 months of age.

(CU9-3763-64-65-75)

63 A 64 D 65 D

18 Independent Study Questions

1. **Chronic increase in intravesical pressure resulting from bladder outlet obstruction can cause herniation of the bladder mucosa through the weakest point of the hiatus above the ureter and produce ____ diverticulum and reflux.**
   A. Hutch **B.** Zenkers
   C. Sliding **D.** Murayu's *(CU9-43)*

2. **Hematuria with _____ RBCs/HPF is significant.**
   A. 5 **B.** 7
   C. 9 **D.** 3 *(CU9-83)*

3. **Abnormal red color of the urine can be caused by all except _____ .**
   A. Resorcinol **B.** Phenothiazines
   C. Rifampin **D.** CHr Lead poisoning *(CU9-96)*

4. **Not true about oxytocin:**
   A. It is a neural hormone
   B. Can function as neurotransmitter
   C. Found in posterior pituitary gland
   D. Found in neurons projecting from the para-ventricular nucleus to the brain stem and spinal cord.
   E. Its blood level is decreased during sexual activity.
   (CU9-730)

5. **The production of _____ in males remains fairlessly constant throughout life.**
   1. Testosterone 2. Corticosteroids
   3. Leptin 4. Thyroxin
   5. Melatonin 6. Prolactin
   7. Estradiol 8. Growth hormone
   A. 2, 6, 7
   B. All true
   C. All except 1 and 8
   D. All except 1, 7, 8 *(CU9-857)*

1 A 2 D 3 A 4 E 5 A

6. Match the following techniques of elevation of a flap:

1. Vascular and cutaneous continuity of flap a Island flap base are left intact.
2. Vascular continuity is maintained: Cuticular b micro vascular free transfer continuity is divided flap
3. Both vascular and cutaneous continuity is c Peninsular flap interrupted

A. 1 and c: 2 and a: 3 and b
B. 1 and a: 2 and b: 3 and c
C. 1 and c: 2 and b: 3 and a
D. 1 and b: 2 and c: 3 and a *(CU9-1026)*

7. Uromodulin is _____ .

A. Myoglobin in urine
B. Tamm-Horsfall mucoprotein
C. Bence-Jones protein
D. $Alfa_1$-acid glycoprotein *(CU9-1144)*

8. NSAIDs are among drugs that cause acute interstitial nephritis, particularly_____.

A. Ibuprofen
B. Fenoprofen
C. Paracetamol
D. 5 – aminosalicylates *(CU9-1328)*

9. Fenoldopam is a _____ .

A. Selective dopamine-1 receptor agonist
B. PDE – 5 stimulator
C. Selective dopamine-1 receptor antagonist
D. PDE – 5 inhibitor *(CU9-1136)*

10. Which urinary acidifying agent, a urease inhibitor, has side effects like deep vein thrombosis ?

A. Ascorbic acid
B. Methenamine hippurate
C. Ammonium chloride
D. Acetohydroxamic acid *(CU9-1426)*

11. The maximal yearly whole body radiation exposure recommended by National Council on Radiation Protection is _____ mrem.

A. 8000 **B.** 7000
C. 5000 **D.** 100 *(CU9-1531)*

6 A 7 B 8 B 9 A 10 D 11 C

12. Only _____ radiofrequency ablation of renal lesions has been shown to cause complete tissue necrosis consistently.
A. Single needle bipolar
B. Single needle unipolar
C. Multitine
D. Extracorporeal *(CU9-1814)*

13. A second, less potent, stimulus for aldosterone release is _____.
A. Sodium **B.** Bicarbonate
C. Chloride **D.** Potassium *(CU9-1822)*

14. Anesthetics and drugs to be avoided in pheochromocytoma patients: 1. ketamine 2. halothane 3. metochopramide 4. chlorpromazine 5. atracurium 6. morphine 7. propofol
A. All of above **B.** All except 3, 4
C. All except 6 **D.** Only 2, 5, 7

15. Which of the following antimuscarinic drug has a 'B' grade recommendation?
A. Darifenacin **B.** Oxybutynine
C. Tolterodine **D.** Propantheline
E. Propiverine *(CU9-2071)*

16. The following quaternary antimuscarinic com-pound/s has/ have low incidence of CNS side effects.
1. Atropine 2. Tolterodine
3. Oxybutynin 4. Propantheline
5. Trospium 6. Propiverine
7. Darifenacin 8. Solifenacin
A. All of the above
B. None of the above
C. Only 4 and 5
D. Only 2, 6 and 7 *(CU9-2094)*

17. It is a relatively selective muscarinic receptor sub-type drug.
A. Propantheline **B.** Trospium
C. Tolterodine **D.** Darifenacin *(CU9-2097)*

18. Brindley device is most commonly used as _____ for treating voiding dysfunction.
A. Electrical stimulation to nerve roots
B. Nonivasive magnetic stimulation
C. Sacral rhizotomy
D. Fine needle accupuncture *(CU9-2164)*

12 C 13 D 14 A 15 D 16 C 17 D 18 A

19. Bioglass is a mixture of _____: it had no toxicity in animal models, tissue integration occurs between the patient's collagen and the surface of the composite material.

A. Calcium oxide, calcium silicone, and soidum oxide
B. Hyaluronic acid and calcium silicone
C. Hyaluronic acid and injectable balloons
D. GAX-collagen, silicone polymer, and sodium oxide

(CU9-2361)

20. The following 'impact of age on incontinence' observation is/are appears/appear to be true.

1. The elderly often excrete most of their fluid intake at night
2. In both sexes, the prevalence of involuntary detrusor contractions increases
3. The PVR probably increases no more than 5 to 100 ml
4. Bladder capacity increases with age
5. Bladder sensation, contractility and ability to postpone voiding decline
6. The striated muscle cells in the rhabdosphincter decline in women

A. All **B.** All except 4
C. All except 6 **D.** All except 3 *(CU9-2305)*

21. Most common cause of colovesical fistula is _____.

A. Diverticulitis **B.** Crohn's disease
C. Irradiation **D.** Colorectal carcinoma *(CU9-2351)*

22. _____ noted in 50% to 70% of cases is the most com-mon presenting symptom of vesicoenteric fistula.

A. Fecaluria **B.** Pneumaturia
C. UTI **D.** Hematuria *(CU9-2351)*

23. The classic presentation of vesicoenteric fistula is described as Gouverneur's syndrome and consists of:

A. Pneumaturia, fecaluria, LUTS, tenesmus
B. Suprapubic pain, urinary frequency, dysuria, tenesmus
C. Hematuria, hematochezia, urge incontinence, fever
D. Urine per rectum, hematuria, suprapubic pain, fever, dysuria

(CU9-2351)

24. _____ is now generally considered to be the most sensitive and specific modality for the diagnosis of colovesical fistula.

A. CT **B.** MRI
C. USG **D.** IVU *(CU9-2352)*

19 A 20 B 21 A 22 B 23 B 24 A

25. Bourne test can be a useful adjuntive study in the evaluation of _____.

A. Colovesical fistula
B. VVF
C. Peritoneovesical fistula
D. Ureterovaginal fistula *(CU9-2352)*

26. Most common cause of renovascular or pyelo-vascular fistula is _____ .

A. Percutaneous nephrolithotomy
B. Periampullary carcinoma
C. Long-term indwelling nephrostomy tube
D. External penetrating/blunt trauma *(CU9-2357)*

27. Though rare, most reported ureterovascular fistulas are _____.

A. Ureter-iliac vein
B. Ureter-iliac artery
C. Ureter-iliac arterio venous *(CU9-2357)*

28. Up to _____ % of patients diagnosed with urethral diverticula may be completely asymptomatic, having lesions diagnosed incidentally on imaging or physical examination.

A. 05 **B.** 10
C. 20 **D.** 30 *(CU9- 2377)*

29. The epithelium of urethral diverticula may be: 1. columnar 2. cuboidal 3. stratified squamous 4. transitional 5. absent

A. Only 3, 4 **B.** only 2,3,4
C. Only 1,2,3,4 **D.** All 1,2,3,4,5*(CU9- 2377)*

30. _____ in particular may affect the viability of BCG and should be avoided if possible during the course of BCG treatment of bladder tumors.

A. Amoxycillin **B.** Quinolones
C. Bactrim DS **D.** Cephalexins *(CU9-2457)*

31. The most promising data for secondary chemo-prevention of urothelial cancers relate to the _____.

A. Cessation of smoking
B. Use of high dose multivitamins
C. Low fat diet
D. Increased fluid intake *(CU9-2467)*

32. On determination of the chemical structure, it became apparent that _____ is not a vitamin but a steroid.

A. Vitamin B_6 **B.** Vitamin D
C. Vitamin K **D.** Vitamin C *(CU9-2705)*

25 A 26 A 27 B 28 C 29 D 30 B 31 B 32 B

33. Find out the wrong statement.

A. Prostate cancer incidence and mortality rates around the world correlate highly With average level of fat consumption, especially for poly-unsaturated fats.

B. There is an inverse relationship between cir-culating androgen levels and measures of obesity.

C. Prostate cancer is unique among solid tumors in that it exists in two forms: a histologic or latent form, which can be identified in approximately 30% of men older than 50 years and 60% to 70% of men older than 80 years.

D. Higher BMI is usually associated with higher serum PSA concentration.

E. Selenium can decrease the risk for development of prostate cancer. *(CU9-2862-63-80)*

34. Find out the true statement:

A. The alpha-tocopherol, beta-carotene cancer prevention trial (ATBC) did not support the role of vitamin E in the prevention of prostate cancer

B. Epidemiologic evidence did not support the role of soy as an anticancer agent.

C. There is mixed epidemiologic evidence that lycopene consumption is associated with a lower risk of prostate cancer.

D. Low-grade PIN must always be commented in diagnostic reports. *(CU9-2870-71-84)*

35 Liquid nitrogen (-195.8°C) is the coldest practical cryogenic agent and has the greatest freezing capacity, but it cannot be used in probes of less than _____ mm.

A. 1 **B.** 2

C. 3 **D.** 0.5 *(CU9-3038)*

36. The most potent of nonsteroidal antiandrogens is _____.

A. Nilutamide **B.** Flutamide

C. Bicalutamide **D.** S isomer flutamide *(CU9-3086)*

37. About one quarter of men receiving_____ therapy will note a delayed adaptation to darkness after exposure to bright illumination.

A. Flutamide **B.** Bicalutamide

C. Nilutamide **D.** Finasteride *(CU9-3087)*

38. Testosterone levels dropping to castrate level within 4 hours of administration of_____ in some cases: the effects were also immediately reversible.

33 D 34 C 35 C 36 C 37 C 38 A

A. Ketoconazole **B.** Bicalutamide
C. Abarelix **D.** Nilutamide *(CU9-3088)*

39. The time of onset of change in the amniotic fluid (AF) is critical and reflects a normal shift from where most of the AF is placental transudate to where it becomes predominantly a product of the fetal urine. By_____ weeks most of AF is fetal urine.
A. 14 – 16 **B.** 16 – 18
C. 18 – 20 **D.** 20 – 22 *(CU9-3178)*

40. "Calcification in wall of cyst may even be thicker and nodular, septa may have minimal enhancement, especially those with calcium: require no surgery " comes under category_____ Bosnaik's classification of simple and complex renal cysts.
A. I **B.** II
C. II F **D.** III
E. IV *(CU9-3348)*

41. The following guideline in management of priapism is not true.
A. In stuttering priapism, administration of an oral beta agonist (terbutaline) once or twice daily is first line therapy . If this treatment is unsuccessful, an oral alpha adrenergic (pseudoephedrine) is recommended.
B. If priapism has been present longer than 48 hours, ischemia and acidosis impair the intracavernous smooth muscle response to sympathomimetics.
C. American urological association also recommended concurrent intracavernous treatment beginning with corporal aspiration and irrigation.
D. In adolescents, the phenylephrine should be diluted with normal saline to a concentration of 100 to 500 µg/mL, and 1 mL injections should be made every 3 to 5 minutes for up to 1 hour. *(CU9-3755)*

42. The color code of 18 French Foley's catheter is ____.
A. Green **B.** violet
C. Orange **D.** Red
E. Yellow **F.** White

43. Renal hypertension is found in __ per cent patients with hypertension:
A. 5-15 **B.** 15-20
C. 20-30 **D.** 2-5 *(SU-658)*

39 D 40 C 41 A 42 D 43 A

44. The most common cause of renal hypertension is:
A. Fibromuscular dysplasia
B. Atherosclerosis
C. Cholesterol emboli
D. Polyarteritis nodosa *(SU 658)*

45. A reduction in renal arterial lumen diametre of at least how much is a must before renal plasma flow is reduced to the point that clinically significant ischaemia results?
A. 40 per cent **B.** 50 per cent
C. 60 per cent **D.** 70 per cent *(SU 659)*

46. Urological lesions that may cause renin-dependent hypertension include obstructive uropathy, benign and malignant renal masses, and chronic pyelonephritis, the latter most commonly associated with:
A. Vesicoureteral reflux
B. Xanthogranulomatous pyelonephritis
C. Perinephric abscess
D. Nephrolithiasis *(SU 659)*

47. All of the following are high-risk factors for renovascular hypertension *except:*
A. Young patient
B. Bruit
C. Accelerated hypertension
D. Azotemia
E. Malignant hypertension
F. Hyperlipidaemia
G. Hypokalemia *(SU 664)*

48. Which is now the initial treatment of choice in all patients with hypertension due to fibromuscular dysplasia, atherosclerotic disease excluding osteal lesions and total occlusion?
A. Medical measures
B. Transluminal angioplasty
C. Surgery (nephrectomy)
D. None of the above *(SU 664)*

49. Angiotensin I converting enzyme is inhibited by which two of the following?
A. Captopril **B.** Saralasin
C. Teprotide **D.** Minoxidil
E. Diazoxide *(SU 660)*

44 B 45 D 46 A 47 F 48 B 49 A,C

50. Prior use of ____, dietary restrictions, and chronic treatment with captopril increases plasma renin activity and causes the captopril challenge test to be nonspecific:
A. Laxatives **B.** Digestive enzymes
C. Diuretics **D.** Contrast media *(SU 662)*

51. The autonomic erection centre is located in the intermediolateral nucleus of the spinal cord at levels:
A. S_{2-4} and T_2 to L_2 **B.** S_{2-4} and T_{10} to L_1
C. S_{2-4} and T_{10} to L_2 **D.** S_{2-3} and T_2 to L_1 *(SU 696)*

52. The cavernous nerves travel along the posterolateral aspect of the seminal vesicles and prostate. These fibres are located at ____ O′ clock position at the prostatic urethra and at ____ O′ clock position at the membranous urethra:
A. 3 and 9; 5 and 7 **B.** 4 and 8; 3 and 9
C. 5 and 7; 3 and 9 **D.** 3 and 9; 4 and 8 *(SU 696)*

53. The erectile centre for somatic motor nerves is loca-ted at the Onuf nucleus of the ventral horn of the:
A. T_{12} to L_1, segment **B.** S_2 level
C. S_{3-4} level **D.** S_{2-4} segment *(SU 696)*

54. Nocturnal (subconscious) erection occurs in:
A. REM sleep **B.** Non REM sleep
C. Stage III of NREM **D.** Stage IV NREM *(SU 696)*

55. The paired internal pudendal artery is the major carrier of blood supply to the penis. The terminal portion of this artery divides into three branches; the cavernosal artery supplies the corpora cavernosa; the bulbourethral artery supplies the corpus spongiosum; and the dorsal artery supplies:
A. Penile skin and subcutaneous tissue
B. The glans
C. The proximal urethra
D. The distal urethra *(SU 696-7)*

56. Match the following different phases of erection:

1. Flaccid phase	**A.** The intracavernous pressure rises well above the systolic pressure

50 C	51 A	52 C	53 D	54 A	55 B	56 1:C, 2:B, 3:D, 4:F, 5:A, 6:E

2. Latent phase	**B.** Increased blood flow in the internal pudendal artery during both systolic and diastolic phase
3. Tumescent phase	**C.** Arterial blood gas value equal those of venous blood
4. Full erection	**D.** Intracavernous pressure rises above diastolic pressure and blood flow occurs only in systolic phase
5. Skeletal or rigid erection phase	**E.** Contraction of the smooth muscles around the sinusoides and arterioles
6. Detumescent phase	**F.** Pressure in internal pudendal artery rises but remains slightly below systolic pressure

(SU 697)

57. Because it lacks the *tunica albuginea*, it functions as an arteriovenous fistula in full erection phase:

A. Corpus spongiosum **B.** Corpus cavernosum
C. Glans **D.** Whole penis *(SU 693)*

58. Studies have shown that erection in response to ____ is not affected by androgen withdrawal in hypogonadal man:

A. Visual sexual stimulation
B. Libido
C. REM sleep
D. All of the above *(SU 699-701)*

59. About ____ per cent of patients with complete upper motor neuron lesion are capable of reflexogenic erection?

A. 30 **B.** 60
C. 95 **D.** 75
E. 100 *(SU 700)*

57 C 58 A 59 C

60. About ____ per cent of patients with complete lower motor lesion are capable of psychogenic erection?
A. 25 **B.** 50
C. 75 **D.** 90 *(SU 700)*

61. The most common hormonal disease associated with erectile failure is:
A. Diabetes mellitus **B.** Androgen deficiency
C. Hypothyroidism **D.** Hyperthyroidism *(SU 700)*

62. Impotence in diabetes mellitus is mostly due to ____ factors:
A. Vascular **B.** Neurogenic
C. Psychogenic **D.** Combination of all *(SU 700)*

63. Impotence occurs in more than ____ per cent of patients after priapism due to fibrosis of corpora:
A. 25 **B.** 50
C. 75 **D.** 100 *(SU 701)*

64. Impotence reportedly occurs in 25 per cent of young diabetics and in almost 75 per cent of elderly patients. Insulin dosage and duration and adequacy of control appear unrelated to sexual function. This statement is:
A. True **B.** False *(SU 702)*

65. Impotence occurs in about ____ per cent of patients undergoing dialysis:
A. 25 **B.** 50
C. 75 **D.** 100 *(SU 701)*

66. Rigiscan device is used:
A. In monitoring the nocturnal erectile activity
B. In intracavernous injection tests
C. In hypnotherapy for impotence
D. As vacuum constriction device in impotent patients
(SU 703)

67. Patients with — impotence have an exaggerated erectile response to vasodilator injection and have a higher rate of priapism:
A. Psychogenic **B.** Neurogenic
C. Hormonal **D.** Arteriogenic *(SU 703)*

68. A patient complaining of decreased sexual interest rather than erectile failure has probably — type of impotence:

60 A	61 A	62 D	63 B	64 A	65 B	66 A	67 B	68 A

A. Hormonal **B.** Psychogenic
C. Neurogenic **D.** Vasculogenic *(SU 704)*

69. The penile brachial pressure index (PBPI) ratio below ____ is strongly indicative of arteriogenic impotence:
A. 0.5 **B.** 0.9
C. 0.6 **D.** 1.2 *(SU 704)*

70. The overall incidence of adverse reaction to urographic contrast media is:
A. 2 per cent **B.** 5 per cent
C. 7 per cent **D.** 10 per cent *(SU 62, CMC)*

71. Which of the following is *incorrect* about the dimension of the kidney?
A. The long diametre (the length) of the kidney is the most widely used and most convenient radiographic measurement
B. In adults, the length of a normal kidney is approximately 3 to 4.5 times the height of the second lumbar vertebra
C. In children over 2 years of age, the length of the normal kidney is approximately equal to the distance from the bottom of the first to the top of the fourth lumbar vertebral body
D. The average adult kidney is about 12 to 14 cm long, and the left kidney is ordinarily slightly longer than the right one *(SU 66)*

72. Absolute contraindications to MRI are all but:
A. Pregnancy
B. Patients with intraocular metal fragments
C. Patients with an electrically, magnetically, or mechanically activated implants (including cardiac pacemakers, biostimulators, neurostimulators, cochlear implants, and hearing aids)
D. Patients with intracranial aneurysm clips, unless the referring physician is certain that the clip is made of nonferromagnetic material *(SU 101)*

73. Currently, which of the following is usually used for transcatheter embolisation of renal tumours?
A. 100 per cent ethanol
B. 2×2×2 mm Gelfoam
C. Ivalon particles
D. Autologous blood clots *(SU 115)*

69 C 70 B 71 C 72 A 73 A

74. Transcatheter embolisation for radiation therapy with radioactive particles can create an interstitial infarct implant capable of delivering high dose radiation to the tumour. The preferred radiopharmaceutical for this is:

A. ^{125}I **B.** Gold-198
C. Radon-222 **D.** Cobalt-60
E. Cesium 137 *(SU 117)*

75. For percutaneous puncture of the kidney, the imaging technique of choice is:

A. CT scan **B.** Ultrasound
C. Fluoroscopy **D.** MRI *(SU 121)*

76. Open surgical biopsy of the kidney rather than percutaneous biopsy is indicated in patients with:

A. Ectopic kidney
B. Renovascular hypertension
C. Diabetes mellitus
D. Solitary kidney *(SU 134)*

77. Cortical imaging and imaging of the collecting system are two basic types of renal imaging. Which of the following agents is known to do both?

A. ^{99m}Tc glucoheptonate
B. ^{99m}Tc DTPA
C. ^{99m}Tc DMSA
D. Chromium-51 ethylene diamine tetra-acetic acid *(SU 143)*

78. The major advantage of radioisotopic cystography is its high sensitivity with relatively limited radiation exposure, approximately____that obtained from conventional voiding cystourethrography:

A. 1/1000th **B.** 1/500th
C. 1/100th **D.** 1/50th *(SU 148)*

79. In patients with neuroblastoma, which of the following radiopharmaceutical is almost 100 per cent sensitive and specific for diagnosis?

A. ^{51}Cr-EDTA **B.** ^{99m}Tc-DTPA
C. ^{99m}Tc-DMSA **D.** ^{123}I-MIBG *(SU 151)*

80. Hydromers are placed onto urethral catheters to allow for transient coating, creating an interface between biologic tissue and the catheter. This interface lasts for only approximately:

A. 24 hours **B.** 72 hours
C. 5 days **D.** 7 days *(SU 155)*

74 A 75 B 76 D 77 A 78 C 79 D 80 C

81. Severe constipation can never cause bilateral hydro-uretero-nephrosis, especially in children, from comp-ression of the lower ureters. This statement is:
A. True **B.** False *(SU 165)*

82. Normal intravesical pressure at the beginning of micturition is about:
A. 50 cm of water **B.** 40 cm of water
C. 30 cm of water **D.** 5 cm of water *(SU 166)*

83. The pressure within the renal pelvis is normally:
A. Close to zero **B.** 5 cm of water
C. 10 cm of water **D.** 30 cm of water *(SU 167)*

84. The finding of a hard midline mass deep in the pelvis in a male infant is apt to represent a markedly thickened bladder caused by:
A. Posterior urethral valve
B. Bilateral vesicoureteral reflux
C. Congenital rectovesical fistula
D. Male pseudohermaphroditism *(SU 188)*

85. The most common cause of genitourinary tract infections in men and urinary tract infections in girls and women is:
A. Ascending infection from the urethra
B. Haematogenic
C. Urethral instrumentation
D. Poor genital hygiene *(SU 198)*

86. New kidney scars seldom develop after the age of:
A. 3 years **B.** 4 years
C. 5 years **D.** 6 years *(SU 204)*

87. Patients with analgesic nephropathy also have an increased incidence of:
A. Transitional cell carcinoma
B. Renal stone disease
C. Squamous cell carcinoma
D. Urethral stenosis *(SU 214)*

88. Most renal cortical abscesses (curbuncles) are:
A. Unilateral
B. Single lesions
C. Occur in the right kidney
D. All of the above *(SU 215)*

81 B	82 C	83 A	84 A	85 A	86 B	87 A	88 D

89. The hallmark of chronic bacterial prostatitis is:
A. Relapsing recurrent urinary tract infection
B. Low backache
C. Bladder outlet obstruction due to bladder neck contracture
D. Urethrorrhagia *(SU 226)*

90. A calcium alginate urethral swab is used for preparing a Gram stain slide for the diagnosis of gonococcal urethritis instead of cotton-tipped swabs because:
A. Cotton-tipped swabs are bactericidal
B. The risk of leaving cotton particles is more in the urethra
C. The smear is best with the former
D. The former retains more urethral discharge *(SU 257)*

91. The drug of choice for treating chancroid is:
A. Erythromycin **B.** Tetracycline
C. Cefuroxime **D.** Cotrimoxazole *(SU 263)*

92. In the normal female, the base of the bladder is about ____ above a line drawn from the inferior margin of the pubis to the sacrococcygeal joint:
A. 2 cm **B.** 2 inch
C. 0.2 inch **D.** 5 cm *(SU 582)*

93. Differentiated normal tissues with low mitotic activity, such as the _____ and _____ , tend to express the effects of radiation much later than cells from more kinetically active tissues.They are also more sensitive to the use of high dose per fraction or hi-LET radiotherapy:
A. Heart
B. Spinal cord
C. Epithelial lining of rectum
D. Epithelial lining of urethra *(SU 14 480)*

94. The clinical end point of kidney when whole-organ radiation tolerance for fractionated radiotherapy is exceeded is:
A. Nephrocalcinosis **B.** Nephrosclerosis
C. ARF **D.** Severe hematuria *(SU 14 481)*

95. It has been seen that compared to treating a patient of cancer prostate with a standard technique (using a 4-field box: and a bilateral arc boost), 3-dimensional conformal radiotherapy is associated with nearly a ____ per cent reduction in the dose received by 50 per cent of the rectum:

89 A 90 A 91 A 92 A 93 A,B 94 B 95 B

A. 20 **B.** 30
C. 40 **D.** 50 *(SU 14 485)*

96. The theoretic advantage of—as an alternative form of external irradiation is related to their relative lack of dependence on the presence of oxygen and the associated relative resistance to the repair of sublethal damage:
A. Heavy-charged particles
B. Protons
C. Neutrons
D. All of the above *(SU 14 486)*

97. As a rule radiotherapy is not recommended for cancer of the penis and male urethra greater than___:
A. 3 cm **B.** 4 cm
C. 5 cm **D.** 6 cm *(SU 14 491)*

98. The first sign that the fibre-optic transmitting the laser is bent excessively is:
A. Burning of the finger
B. Sensation of warmth
C. Immediate numbness of the finger
D. Getting an electric-like shock *(SU 14 463)*

99. The major tissue constituent absorbing the Nd:YAG beam energy is ____:
A. Protein **B.** Fat
C. Water **D.** Blood *(SU 14 464)*

100. The depth of penetration of the Nd:YAG laser beam is roughly ____ fold more than that of CO_2 laser beam:
A. 50 **B.** 30
C. 20 **D.** 100 *(SU 14 465)*

101. The argon laser, from a practical standpoint, causes lesions whose depth of thermal damage is:
A. Intermediate between that of the CO_2 and Nd:YAG lasers
B. Much less than that caused by Nd:YAG laser
C. Thirty times less than that caused by CO_2 laser
D. Twenty times more than that caused by pulsed dye laser *(SU 14 466)*

102. Which of the following procedures require a 2 to 3 day period of Foley catheter drainage in 75 per cent of patients following surgery for BPH?

96 C 97 B 98 B 99 A 100 A 101 A 102 B

A. Visual laser ablation of the prostate (VLAP)
B. Transurethral evaporation of the prostate (TUEP)
C. Transurethral laser induced prostatectomy (TULIP)
D. All of the above *(SU 14 469)*

103. Which of the following stones are hardest to break by pulsed dye lasers?
A. Calcium oxalate monohydrate
B. Uric acid
C. Apatite
D. Calcium oxalate dihydrate *(SU 14 470)*

104. The main urological application of photodynamic therapy technique has been in the treatment of widespread carcinoma *in situ* of the urinary bladder; the usual dose of hematoporphyrin derivative (HPD) that is given 3 to 48 hours prior to the procedure is:
A. 1.5 mg/kg body weight
B. 2.5 mg/kg body weight
C. 4.0 mg/kg body weight
D. 7.2 mg/kg body weight *(SU 14 471)*

105. The most common type of extravasation observed on retrograde pyelography is:
A. Pyelotubular **B.** Pyelointerstitial
C. Pyelosinus **D.** Pyelolymphatic
E. Pyelovenous *(MU 10)*

106. The nuclear imaging of genitourinary tract is generally employed in children since the radiation dose is reduced—compared to conventional contrast-voiding cystography:
A. 1000 fold **B.** 800 fold
C. 500 fold **D.** 10 fold *(MU 27)*

107. Polycystic kidneys usually demonstrate multiple ___ on ^{99m}Tc DMSA and ^{99m}Tc GH:
A. Hot spots **B.** Cold spots
C. Variegated spots *(MU 30)*

108. The most widely used method of clinical evaluation for assessment of renal perfusion and function after renal transplantation is dynamic renal transplant imaging with:
A. ^{99m}Tc DTPA
B. ^{99m}Tc DMSA
C. ^{99m}Tc HG
D. Fibrinogen I 125 scan *(MU 30)*

103 A 104 B 105 C 106 A 107 B 108 A

109. "Urethral chill" is:
- **A.** Burning and chilling sensation in urethra after intravesical instillation of BCG for carcinoma of bladder
- **B.** Bacteremia and sepsis following urethral instrumentation
- **C.** The severe cold felt by the patient during cryosurgery for urethral lesion
- **D.** The application of ice-cold water mixed with 5-fluorouracil to the urethral lumen for treating condylomata *(MU 57)*

110. Electrohydraulic lithotripsy is based on spark discharge within a liquid, which produces shock waves that fragment the stone; spark formation is optimum in:
- **A.** 1.5 per cent glycine **B.** Isotonic saline
- **C.** 1/6th normal saline **D.** Distilled water *(MU 57)*

111. Prehn's sign is:
- **A.** Elevation of the testis increases pain in torsion and decreases pain in epididymitis
- **B.** Elevation of the testis increases pain in epididymitis and decreases pain in torsion
- **C.** The presence of the cremasteric reflex in the absence of testicular torsion
- **D.** The clapper bell position of the contralateral testis

(MU 63)

112. Addison's disease is characterised by:
- **A.** Hypokalemia **B.** Hyperkalemia
- **C.** Hyponatremia **D.** Hypernatremia *(MU 67)*

113. Potassium balance is primarily determined by:
- **A.** Oral intake **B.** Liver
- **C.** Kidneys **D.** Intracellular K^+ content *(MU 73)*

114. Hypertrophy of the vesical neck causes an acute angulation between the trigone and the prostatic urethra, described cystoscopically as:
- **A.** Bas-fond deformity
- **B.** Compound deformity
- **C.** Angular deformity
- **D.** Cubble stone deformity *(MU 81)*

115. In thin patients the bladder can be palpated or purcussed when distended to more than:
- **A.** 100 ml **B.** 200 ml
- **C.** 300 ml **D.** 400 ml *(MU 82)*

109 B 110 C 111 A 112 B 113 C 114 A 115 B

116. The earliest change in BPH is:
A. Asymmetry of the lateral lobes
B. Upper pole cannot be reached with finger
C. Loss of the median depression or furrow
D. Change in consistency *(MU 82)*

117. The functional results of open prostatectomy are somewhat ____ to those achieved with TURP:
A. Inferior **B.** Superior
C. Comparable *(MU 85)*

118. Idiopathic haematuria constitutes as many as — per cent of haematuria patients:
A. 10 **B.** 20
C. 30 **D.** 40 *(MU 87)*

119. In sickle cell anaemia, for reasons not understood, bleeding occurs ____ times more often from the left kidney than the right and is slightly more common in females:
A. 24 **B.** 2
C. 14 **D.** 4 *(MU 91)*

120. The most common cause of spontaneous perirenal haematoma in adults is:
A. Renal angiomyolipoma
B. Bourneville's disease
C. Renal artery aneurysm
D. Adult polycystic kidney disease *(MU 95)*

121. The most common cause of Cushing's syndrome in children is:
A. Adrenal carcinoma **B.** Adrenal hyperplasia
C. Adrenal adenoma **D.** Adrenal haemorrhage *(MU 104)*

122. 'Micturition syncop', a rare phenomenon occurs in patients with:
A. Pheochromocytoma of the bladder wall
B. Echinococcus cyst of prostate
C. Bilharzial bladder
D. Wolman's disease of bladder *(MU 107)*

123. The most common site of origin for metastasis to adrenal gland is:
A. Stomach **B.** Large bowel
C. Lung **D.** Female breast *(MU 109)*

124. Which is the single most common cause of hypercalciuria?
A. Resorptive hypercalciuria
B. Absorptive hypercalciuria

116 C 117 B 118 B 119 D 120 A 121 A 122 A 123 D 124 B

C. Renal hypercalciuria
D. Idiopathic hypercalciuria *(MU 126)*

125. Drugs of choice in renal hypercalciuria are:
A. Thiazide diuretics
B. Orthophosphates
C. Cellulose phosphate
D. Calcium channel blockers *(MU 127)*

126. Exogenous hyperoxaluria results when ascorbic acid is taken in amounts greater than:
A. 20 gm a day **B.** 10 gm a day
C. 5 gm a day **D.** 2 gm a day *(MU 128)*

127. The single most important factor in maintaining urethral continence is:
A. Coaptation of the urethral mucosa
B. Striated muscle fibres
C. Smooth muscle within the urethral wall
D. Functional length of the urethra *(MU 134)*

128. Significant stress incontinence is defined as occurring:
A. Two or more times a month
B. Ten or more times a month
C. Two or more times a day
D. Four or more times a day *(MU 135)*

129. In most instances stress incontinence in women results from defect in pelvic support of the bladder neck and that is:
A. Type I incontinence **B.** Type II incontinence
C. Type III incontinence **D.** Type IV incontinence *(MU 135)*

130. The most common complication of intracavernosal pharmacotherapy with papaverine and phentolamine is:
A. Penile induration
B. Priapism longer than 8 hours
C. Pain at injection site
D. Local haematoma *(MU 135)*

131. Sterility is synonymous with infertility but usually used to mean permanent, irreversible infertility. This statement is:
A. True **B.** False
C. Still controversial *(MU 157)*

132. The epididymis is an extremely long, tightly coiled tube that the sperms traverse over a period of approximately:

125 A 126 C 127 C 128 A 129 A 130 D 131 A 132 B

A. 24 days **B.** 12 days
C. 36 days **D.** 64 days *(MU 157)*

133. Bone scans are more sensitive than skeletal radiography and are able to detect lesions up to ___ before they are apparent on X-ray:
A. 3 months **B.** 6 months
C. 8 weeks **D.** 4 weeks *(MU 170, JIPMER)*

134. Which of the following remains the most accurate staging method available for cancer prostate?
A. Pelvic lymphadenectomy
B. Transrectal ultrasonography
C. CT scanning
D. Lymphangiography *(MU 170)*

135. Lymphangiography has an overall accuracy of about 70 per cent in detecting pelvic nodal metastases from prostatic cancer. All of the following are responsible for understaging *except:*
A. Nodes completely replaced by tumour
B. Metastases that are too small
C. Presacral nodes are not visualised
D. Internal iliac nodes are visualised only in 50 per cent of instances
E. External iliac and obturator nodes are not visualised
(MU 170)

136. In teletherapy, the amount of radiation absorbed by soft tissues exposed to 1 rad is generally approximately 1 rad. Bony structures absorb approximately ____ as much as soft tissues. This difference becomes important when the X-ray beam must traverse bone to reach its target:
A. Four times **B.** Ten times
C. Twice **D.** Six times *(MU 198-199)*

137. A WBC count of less than 2000/mm^3 or a platelet count of less than ____ is an absolute indication to stop radiotherapy until recovery occurs:
A. 80,000/mm^3 **B.** 50,000/mm^3
C. 60,000/mm^3 **D.** 75,000/mm^3 *(MU 202)*

138. Clinically radiation nephritis is characterised by azotemia, proteinuria, hypertension, and very severe anaemia, which typically develops at least ____ after radiation therapy:
A. 6 months **B.** 12 months
C. 24 months **D.** 18 months *(MU 202)*

133 B 134 A 135 E 136 C 137 B 138 D

139. The incidence of erectile impotence has been estimated at ____ per cent following external beam radiotherapy for prostate cancer and 20 to 30 per cent after interstitial therapy:
A. 15 **B.** 40
C. 50 **D.** 70 *(MU 203)*

140. About 20 per cent of adolescent mumps patients have mumps orchitis which may be bilateral in 10 per cent of patients. About ____ per cent of mumps orchitis patients suffer from permanent loss of spermatogenesis:
A. 10 **B.** 20
C. 30 **D.** 40 *(MU 217)*

141. All of the following are contraindications for renal dialysis *except:*
A. Pericarditis
B. Irreversible dementia or coma
C. Advanced malignancy
D. Hepatorenal syndrome *(MU 261)*

142. Measurement of 24 hour creatinine excretion, when compared to the ideal body weight (IBW) provides an index of muscle use. Depletion of muscle mass is suggested by a value of less than 18 mg/kg IBW in women and less than ____ in men:
A. 23 mg/kg IBW
B. 27 mg/kg IBW
C. 29 mg/kg IBW
D. 21 mg/kg IBW *(MU 283)*

143. The half-life of hCG is:
A. 4 to 5 days **B.** 12 to 24 hours
C. 24 to 36 hours **D.** 2 to 3 days *(MU 180)*

144. Kwashiorkor is a disease state which is caused by severe depletion of the body's:
A. Fat stores **B.** Skeletal muscle protein
C. Bone marrow **D.** Visceral protein
E. Immune system *(AUA 95-3)*

145. Marasmus is:
A. Not common in hospitalised patients
B. Easily treated
C. Due to a loss of visceral protein
D. Due to a loss of skeletal muscle protein and fat stores
E. Seen only in third world countries *(AUA 95-3)*

139 C 140 C 141 A 142 A 143 C 144 D 145 D

146. Hemodialysis is associated with the loss of:
A. Weight **B.** Fat stores
C. Free amino acids **D.** Skeletal muscle stores
E. Immune competence *(AUA 95-3)*

147. The gut preservation and immune stimulation seen with enteral alimentation is largely due to inclusion of:
A. Vitamins **B.** Lipid
C. Glutamine **D.** Lysine
E. Arginine *(AUA 95-3)*

148. Alteration in liver enzymes linked to the long-term use of TPN is related to:
A. Pre-existing liver disease
B. Intravenous lipid solutions
C. The delivery of the calories in excess of optimal needs
D. Excessive protein in TPN solutions
E. Vitamin overdose *(AUA 95-3)*

149. A burn covering the anterior trunk comprises approximately what percentage of the total body surface area?
A. 1 per cent **B.** 7 per cent
C. 9 per cent **D.** 18 per cent
E. 30 per cent *(AUA 95-4)*

150. Which of the following causes pain when applied to areas of partial thickness burn?
A. Sulfamylon cream
B. Silver nitrate solution
C. Saline soaks
D. Silvadene cream
E. Amphotericin B solution *(AUA 95-4)*

151. A patient with a 30 per cent TBSA (total body surface area) burn is resuscitated in accordance with the modified Brooke formula. If he weighs 100 kg, what is the estimated rate of fluid required during the first eight hours postburn?
A. 125 ml/hour **B.** 200 ml/hour
C. 375 ml/hour **D.** 500 ml/hour
E. 750 ml/hour *(AUA 95-4)*

152. Burns to the perineum are frequently associated with a higher mortality. The best explanation for this association is:
A. The higher rate of infectious complications on the perineum
B. The higher rate of urinary catheterisation in patients with perineal burns

146 C 147 C 148 C 149 D 150 A 151 C 152 C

C. The large body surface area burned in patients with perineal burns
D. The most frequent occurrence of electrical burns in patients with perineal burns
E. The frequent co-existence of inhalation injury and perineal burns *(AUA 95-4)*

153. Which of the following is least likely to result in circulatory compromise?
A. Switching an obese, supine patient from spontaneous to mechanical ventilation
B. Slowly changing a patient from lithotomy to supine position
C. Moving a near-term gravid patient from left lateral to supine position
D. "Jackknifing" a patient in lateral position to improve exposure
E. Supporting the prone patient by placing pads under each clavicle and groin *(AUA 95-22)*

154. The most useful and popular model vectors for the efficient introduction of foreign genes into target mammalian cells have been derived from murine and avian:
A. Rotaviruses **B.** Retroviruses
C. Proviruses **D.** Arboviruses *(CU 7 39)*

155. The G proteins were discovered by _____ for which they were awarded the 1994 Nobel Prize in medicine:
A. Alfred G Gilman and Martin Rodbell
B. Neer and Clapham
C. Gardner G and Snostad DP
D. Gilbert W and Gilman AG *(CU 7 42)*

156. Testicular cysts found incidentally on sonography:
A. Are relatively common
B. Only a few cases have been reported
C. Are always complex and further investigation should be done
D. Needs further evaluation even if they appear simple on sonography *(CU 7 212)*

157. Yearly doses of radiation exposure to the lenses approaching _____ rad, or more are a strong indication for protective glasses that may prevent cataracts:
A. 15 **B.** 50
C. 400 **D.** 150 *(CU 7 242)*

158. When long-term drainage with percutaneous nephro-stomy is required, regular change of the catheter is advised every:

153 B 154 B 155 A 156 A 157 A 158 C

A. One month **B.** Six weeks
C. Three months **D.** Three weeks *(CU 7:246)*

159. The percutaneous approach to the treatment of ureteropelvic junction obstruction (endopyelotomy) requires _____ access for the best endoscopic visualisation of the renal pelvis and ureteropelvic junction:
A. Anterior upper or middle calyceal
B. Posterior upper or middle calyceal
C. Lateral upper or middle calyceal
D. Posterior apical or lower calyceal *(CU 7 247)*

160. The gene responsible for the congenital form of diabetes insipidus (nephrogenic) is located on the:
A. Short arm of X chromosome
B. Long arm of X chromosome
C. Short arm of Y chromosome
D. Long arm of Y chromosome *(CU 7 295)*

161. Intensive blood glucose control, maintaining the blood glucose concentration close to normal range, delays the onset and slows the progression of diabetic:
A. Nephropathy **B.** Retinopathy
C. Neuropathy **D.** Only A and B
E. Only A and C **F.** A, B, C all

162. Match the following on the basis of their primary site of immunoregulatory activity:

A. Inhibitors of transcription	1. 15-deoxyspergualin (DSG)
B. Inhibitors of growth factor signal transduction	2. Cyclosporine A, tacrolimus
C. Inhibitors of nucleotide synthesis	3. Rapamycin, leflunomide
D. Inhibitors of differentiation	4. Azathioprine, mizoribine, brequinar sodium, mycipheno-late mofetil *(CU 7 495)*

163. A point system has evolved in USA for the selection of cadavar kidney transplant recipients. According to this, a recipient of age 11 to 18 years gets _____ points:
A. 1 **B.** 2
C. 3 **D.** 4 *(CU 7 516)*

159 B 160 B 161 F 162 A-2, B-3, C-4, D-1 163 C

164. _____ is regarded as a central mediator of pathophysiologic changes associated with the release of lipopolysaccharide (LPS) and possibly with septic shock by microorganisms that do not contain LPS:
A. Interleukin I
B. Interleukin II
C. Interleukin I receptor antagonist (IL-1ra)
D. Tumour necrosis factor (TNF) *(CU 7 585)*

165. The classic clinical presentation of fevers and chills followed by hypotension is only manifest in 30 per cent of patients with gram-negative bacteremia. Even before temperature elevation and onset of chills, bacteremic patients often begin to:
A. Hyperventilate
B. Have tenesmus
C. Sweating
D. Get confused *(CU 7 585)*

166. Presence of _____ cells in the detrusor is more specific for interstitial cystitis than its pressure in urothelium:
A. Lymphocytes **B.** Mast
C. Macrophages **D.** Mononuclear giant *(CU 637)*

167. One of the following tricyclic antidepressants has become a staple of oral treatment for interstitial cystitis:
A. Imipramine **B.** Desipramine
C. Amitriptyline **D.** Doxepin *(CU 646)*

168. Which of the following are nonlymphatic filarial parasites?
A. *Brugia malayi* **B.** *B. timori*
C. Dirofilaria **D.** Dipetalonema
E. Loa **F.** C, D and E
G. A, B and C **H.** A, B and D *(CU 7 757)*

169. Which of the following has no effect on adult filariae?
A. Diethylcarbamazine **B.** Ivermectin
C. Desideratum *(CU 7 765)*

170. The term 'trapped prostate' is a condition:
A. When prostatic enlargement develops in patients with bladder neck dysfunction as a result of which double obstruction results
B. When surgical alignment of prostatic urethra with membrano-bulbar urethra is difficult in traumatic floating prostates

164 D 165 A 166 B 167 C 168 F 169 B 170 A

C. A congenital anomaly where the prostate is only rudimentary
D. When urethral obstruction results from left over prostatic chips during/after TURP *(CU 7 968)*

171. The L/N/S/C3 classification system represents a different characteristic of:
A. Male urethral diverticulum
B. Female urethral diverticulum
C. Urethrovaginal fistula
D. Vesicovaginal fistula *(CU 7 1147)*

172. Which of the following is a *wrong* statement?
A. The inability to visualise bladder on prenatal ultrasound almost always represents an associated anomaly
B. Absence of hymen in newborn girls suggests the presence of some urogenital anomaly (atresia, duplication)
C. Cystic anomalies of the Cowper's gland and duct system engender syringocele
D. Bartholin's gland in females are homologus of the prostate gland in males *(CU 7 1586-1606)*

173. The features of the clinical entity referred to as _____ include hematuria, papillary necrosis, glomerulopathy, nephrogenic diabetes insipidus, incomplete renal tubular acidosis, hyperuricemia, and asympto-matic bacteriuria:
A. Sickle cell nephropathy
B. Congenital reflux nephropathy
C. Nephritic syndrome
D. SLE nephropathy *(CU 7 1676)*

174. Which of the following is *not a true* statement?
A. Hypertension in pyelonephritogenic nephropathy is independent of the degree of renal scarring
B. Case controlled studies suggests that the duration of breastfeeding may confer a protective effect against UTI during first six years of life
C. Nitrofurantoin is an effective urinary prophylactic agent in girls at doses of 1.2 to 2.4 mg/kg each evening
D. The vast majority of patients with intrathoracic renal ectopia remain asymptomatic and pulmonary symptoms are exceedingly rare *(CU 7 1688-1719)*

175. Nitrous oxide is synthesized from endogenous _____ by NO synthetase (NOS):
A. L-arginine **B.** N-methyl-L-arginine
C. N-nitro L-arginine **D.** N-amino-L-arginine *(CU 7 1164)*

171 B 172 D 173 A 174 B 175 A

176. The *untrue* statement out of the following is:

A. When scrotal orchiopexy is performed for retractile testis, a dartos pouch operation should be performed which is also the most reliable and safest technique for the prevention of testicular torsion

B. There are three types of prostate neuroendocrine cells, with the major type containing both serotonin and thyroid stimulating hormone

C. Immunohistochemical identification of basal cells with basal cell-specific anticytokeratin monoclonal antibodies (34-beta-E12) markedly improves the histologic diagnosis of prostate cancer

D. Alpha 1D-receptor appears to be the most abundant in the prostate *(CU 7 1374-1388)*

177. _____ contains the highest concentration of endorhelins:

A. Human seminal fluid **B.** Renal vein

C. Testicular veins **D.** Parathyroid glands *(CU 7 1414)*

178. Find out the *wrong* statement:

A. Important protein growth factors such as nerve growth factor, bombesin like growth factor, calcitonin, parathyroid and thyroid stimulating hormones are present in the prostate

B. The average age-related increase in prostate size in the Olmsted County Study population was 2 ml per decade

C. There is substantial evidence that BPH has an inheritable genetic component

D. The serum PSA is reduced approximately 40 to 50 per cent after 3 to 6 months of treatment with finasteride *(CU 7 1415-1436)*

179. *False* about the polycystic kidney disease:

A. All children with RPK have lesions in the periportal areas of the liver

B. RPK has a spectrum of severity, the most severe form appearing earliest in life

C. Two genes have been identified as the culprits of DPK. The PKD1 gene is localised on the short arm of chromosome 16, and the PKD2 gene localised to chromosome 4

D. Hematuria has become the principal form of presentation in DPK *(CU 7 1767-1771)*

180. One-third to one-half of the patients with medullary sponge kidney have _____:

176 D 177 A 178 B 179 D 180 C

A. Hypokalaemia **B.** Hyperuricemia
C. Hypercalcemia **D.** Hypercitraturia *(CU 7 1795)*

181. Which of the following does not come in the differential diagnosis of bilateral renomegaly and renal cysts?
A. Tuberous sclerosis
B. Autosomal recessive polycytic kidney disease
C. Von Hippel-Lindau disease
D. Ask-Upmark kidney *(CU 7 1804)*

182. Herniation of the ureter is an extremely rare condition. In a searched literature most of them were:
A. Paraperitoneal **B.** Femoral
C. Inguinal **D.** Scrotal *(CU 7 1852)*

183. Which of the following is a *wrong* statement?
A. One of the typical indications for antivesicoureteral surgery is noncompliance with medical management
B. In the endoscopic treatment of reflux, a bulking material is injected under direct vision at the 12 O'clock position into the subureteral space approximately 1 to 2 cm proximal to the ureteral orifice
C. It is generally agreed that the cause of primary obstructive megaureter is an aperistaltic juxtavesical segment 3 to 4 cm long that is unable to propagate urine at acceptable flow rates
D. In the strictest sense, only a male patient may harbor the complete Prune-Belly syndrome. Yet about 3 per cent cases occur in genetic females

184. Postoperative hypospadias repair erections are a problem in the postpubertal patients. The best medication is probably:
A. Diazepam **B.** Estrogens
C. Cyproterone acetate **D.** Amylnitrate pulvules *(CU 7 2115)*

185. All of the following statements are true *except:*
A. If the basal gonadotropin levels (FSH in parti-cular) are very low, in a boy less than 9 years of age, further work-up is not necessary to diagnose bilateral anorchia
B. If the testicular vessels are seen to end blindly on laparoscopy, this signifies that the testis as absent on that side and that no surgical exploration is necessary
C. Aggressive chemotherapy appears to be the mainstay of therapy in the care of patients with synchronous bilateral Wilms' tumour
D. Neuroblastoma is the most common malignant tumour of infancy

181 D 182 A 183 B 184 D 185 A

E. Leydig cell tumours are the most common gonadal stromal tumours in both children and adults *(CU 7 2178-2231)*

186. All of the following are the hallmarks of cancerous cells *except:*
A. Loss of growth regulation
B. Capability to metastasize
C. Immortalization
D. Apoptosis
E. Induction of angiogenesis *(CU 7 2259)*

187. The loss of heterozygosity of chromosome ____ at the TP53 locus and somatic mutation of TP53 are the most common genetic alterations reported to date in human cancer:
A. 17 **B.** 16
C. 21 **D.** 6 *(CU 7 2265)*

188. Oncocytoma refers only to tumours that contain a population of highly differentiated ____ granular cells:
A. Eosinophilic **B.** Lymphocytic
C. Monocytic **D.** Giant *(CU 7 2287)*

189. Type II interferon is:
A. Interferon alpha **B.** Interferon beta
C. Interferon gamma *(CU 7 2313)*

190. E-cadherin is:
A. A tumour suppressor gene
B. A hormone found in prostate gland only
C. A chemotherapeutic agent being tried on cancer prostate
D. The current drug of choice for treating prostatodynia
(CU 7 2491)

191. Which of the following is a *wrong* statement?
A. Hemibody irradiation (HBI) should be considered in patients of cancer prostate with multiple bone disease sites that are not responsive to hormone or chemotherapy and have adequate bone marrow function
B. The mineralogic name of magnesium hydrogen phosphate trihydrate urinary calculi is newberyite
C. The number of mucosal layers is substantially greater in renal pelvis than it is in lower ureter
D. The most common cause of ureteral avulsion during URS is trying to extract a calculus that is too large for a ureter
(CU 7 2614-2784)

192. The cornerstone of aldosteronism medical therapy caused by bilateral hyperplasia is:

186 D 187 A 188 A 189 C 190 A 191 C 192 A

A. Spironolactone **B.** Nifedipine
C. Amiloride **D.** Phantolamine *(CU 7 2947)*

193. ***Not a true*** **statement:**
A. Metyrosine has been recommended in addition to phenoxybenzamine or propranolol during preparation of the patient of pheochromocytoma for anaesthesia and surgery
B. In patients with pheochromocytoma it is recommended that induction with an intravenous agent such as thiopental, followed by isoflurane as the agent of choice as an inhalation agent for general anaesthesia
C. The greatest determinant of mortality in patients with renal trauma is the nature and extent of the renal injury
D. A transvaginal ureterolithotomy should be used only in a patient with a large, fixed, distal ureteral stone that can be easily palpated bimanually *(CU 7 2956-3089)*

194. Which of the following is a *wrong* statement?
A. The most common complication of endopyelotomy is failure to relieve obstruction
B. Balloon dilation is generally effective only with strictured ureteral segments less than one cm length and of short duration
C. The weakest point of the urinary bladder is the vesicoureteral junction; sudden blunt force applied to the full bladder produces intraperitoneal rupture at this point
D. Deterioration of the upper tracts in patients with urinary intestinal diversion is more likely when the culture becomes dominant for proteus or pseudomonas *(CU 7 3066-3153)*

195. Complete or partial rupture of the prostatomembranous urethra with extravasation confined to below the urogenital diaphragm on retrograde urethrogram is:
A. Type I urethral injury
B. Type II urethral injury
C. Type III injury
D. Type IV injury *(CU 7 3109)*

196. Find out the *wrong* statement:
A. The bladder volume achieved through augmentation must be adequate to handle the patient's urinary output for an acceptable period of time (usually 4 hours)
B. Video urodynamics can predictably say which patient will be able to void spontaneously and empty well after a bladder augmentation

193 C 194 C 195 B 196 B

C. The secretory nature of gastric mucosa may result in the 'hematuria and dysuria syndrome' after gastrocystoplasty
D. The urinary pH may decrease remarkably after meals following gastrocystoplasty *(CU 7 3169-3179)*

197. Subepithelial deposits of amyloid in the ____ have been reported in 4 per cent to 17 per cent of male autopsies, with an incidence up to 20 per cent in men older than 76 years of age:
A. Prostate **B.** Seminal vesicles
C. Cowper's gland **D.** Corona glandis *(CU 7 3307)*

197 B